THREE ESSAYS ON THE INTERGENERATIONAL TRANSMISSION OF FAMILY ATTITUDES AND BEHAVIORS

by

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ABSTRACT

Dissertation: Three Essays on the Intergenerational Transmission of Family Attitudes and Behaviors

Socialization is a key mechanism through which attitudes and values are transmitted from one generation to the next. Socialization has occurred when an individual has *internalized* the attitude or value in question—that is, it has been integrated into the individual's own system of beliefs. Utilizing a life course perspective and an oft-cited two-step model of internalization, I address four questions about the intergenerational transmission of family attitudes and behaviors: (1) How do early family characteristics influence children's perceptions of their mothers' attitudes toward family behaviors later in life? (2) How is mothers' sex-themed communication related to the accuracy of teens' perceptions of their mothers' attitudes toward sex? (3) How is family structure related to the accuracy of teens' perceptions of their mothers' attitudes toward sex? And (4) How do mothers' family attitudes influence their adult children's marital/cohabiting relationship quality? To investigate these questions I use longitudinal data from the Intergenerational Panel Study of Mothers and Children and the National Longitudinal Study of Adolescent Health.

CHAPTER I.

INTRODUCTION

One of the central themes of the life course perspective is the principle of linked lives, or interdependence (Elder 1977; 1994), which emphasizes the importance of social relationships across the life span. The principle of linked lives states that individuals' life experiences and trajectories are influenced by relationships with, and the experiences of family and peers with whom their lives are embedded. One way in which interdependence is manifested is in the intergenerational transmission of behaviors and attitudes. Sociological and demographic research has demonstrated the influence of parents' experiences and behaviors on many different dimensions of children's family formation behavior, including union formation, dissolution, childbearing, and premarital sex, to name a few. For example, research shows that parental divorce increases children's odds of cohabitation, nonmarital childbearing, and early sexual activity (Cherlin et al. 1995), and mothers' single parenthood increases the likelihood that daughters will have a teenage birth (McLanahan and Bumpass 1988). Parents' past income and education both have negative effects on children's rates of union formation (Thornton, Axinn, and Xie 2007).

Some of the most interesting intergenerational effects demonstrated in the family literature concern the effects of parents' *attitudes* on their children's family formation behaviors. Though the status attainment literature has recognized the importance of

parental preferences for children's socioeconomic mobility since the 1970s (Sewell and Hauser 1975), the application of intergenerational models involving parental attitudes or preferences to other domains of children's outcomes has been a more recent phenomenon (Barber et al. 2002). Using longitudinal data from the Intergenerational Panel Study of Parents and Children, several analyses have demonstrated these effects. For example, mothers' preferences for their children's family formation behaviors have significant effects on their children's childbearing. Mothers who prefer early marriage, large families, low levels of education, and stay-at-home-motherhood for their children have children who enter parenthood earlier than their peers (Barber 2000). Also, mothers' attitudes toward cohabitation influence the type of unions their children form. Daughters whose mothers have positive attitudes toward cohabitation are more likely to cohabit, and those whose mothers disapprove of cohabitation are more likely to marry (Axinn and Thornton 1993). Further, mothers' tolerance of premarital sex increases cohabitation rates and decreases marriage rates (Thornton, Axinn, and Xie 2007). Mothers' preferences for high levels of schooling for their children delays marriage, and mothers who prefer that their children marry early and produce many grandchildren have children who marry at increased rates (Thornton, Axinn, and Xie 2007).

One of the key mechanisms through which parents' attitudes affect their children's behavior is socialization (Barber 2000; Liefbroer and de Jong Gierveld 1993). In socialization, parents' attitudes affect their children's behavior by influencing how the children *want* to behave—by shaping the child's own preferences and attitudes. Children may also develop similar attitudes and preferences to their parents through shared experiences, backgrounds, and social positions (Bengtson 1975; Barber 2000).

According to the theories of Reasoned Action and Planned Behavior (Fishbein and Ajzen 1975), positive attitudes toward a behavior, coupled with social pressure or social support, increase the likelihood of that behavior, and vice versa. Thus, when parents influence their children's attitudes through socialization, they are likely to also influence their children's behavior.

In this dissertation, I present three papers related to the intergenerational transmission of family attitudes and behaviors. Specifically, the first two essays relate to the social psychological processes involved in the parental socialization of family attitudes. The third essay examines the influence of parental family attitudes on children's relationship experiences.

Chapter II: Children's Perceptions of their Parents' Attitudes: The Role of Family Context

In Chapter II, I examine the influence of family context early in life on children's perceptions of their mothers' attitudes toward marriage and childbearing in late adolescence. I draw from one of the central themes of the life course perspective, the principle of linked lives, which posits that individuals' life transitions and trajectories are influenced by the experiences of family and peers with whom their lives are embedded. Specifically, I look at early life measures of family integration, religion, socioeconomic status, and mother's marital/childbearing experience. I also consider gender differences in the relationship between family context and children's perceptions of their mothers' attitudes. I argue that children make inferences about their parents' attitudes and values from some combination of explicit messages *and* family context, which includes parental behavior, background, religion, friendships, and more. Data from the Intergenerational

Panel Study of Mothers and Children, a 31-year, eight-wave panel study of 1113 White mothers and their children, provide rich information about the parental and family characteristics hypothesized to influence children's perceptions of maternal attitudes.

This analysis makes an important contribution to the literature on children's perceptions of their parents' attitudes because it demonstrates the importance of factors beyond parents' explicit messages for the development of perceptions. The effects of family context I find all operate independently of mothers' and children's actual preferences; this suggests that mothers aren't directly or clearly communicating their marital and childbearing preferences. Instead, children appear to infer their mothers' attitudes from some combination of what she says, how she behaves, her background, her religion, who she hangs around with, etc—in short, from a combination of messages and context. While this analysis provides important insight into children's perceptions of their mothers' attitudes, future studies into children's perceptions would benefit from further explorations of other dimensions of family context, especially the characteristics of other important family members, including fathers and siblings.

Chapter III. Parental Communication, Family Structure, and the Accuracy of Children's Perceptions of their Mother's Attitudes toward Sex

The intergenerational socialization of adolescent sexual behavior is of particular interest to researchers and public health professionals concerned with the risks of sexual activity at young ages and to social psychologists hoping to tease apart the complex relationships between parents' preferences, parenting styles, and behaviors, and children's outcomes. Several studies have demonstrated the importance of teens' perceptions of their parents' attitudes for predicting subsequent sexual behavior (Dittus

and Jaccard 2000; Dittus et al. 1997; Fingerson 2005; Jaccard and Dittus 2000; Seiving et al. 2000). In Chapter III, I explore the correlates of teens' *accuracy* in perceiving their mothers' attitudes toward sex, including mothers' reports of her attitudes toward communicating about sex, and the frequency of sex-related communication with the child, as well as two important dimensions of family structure: birth order and sibling sex composition. Data used in these analyses come from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a 14-year, four-wave longitudinal study of adolescents, representative of U.S. adolescents in grades 7-12 in 1994-95. Separate parent and child interviews provide detailed measurement of sexual attitudes and behavior, as well as children's perceptions of their parents' attitudes toward sex.

My results indicate that while children more accurately perceived their mothers' attitudes toward sex when the mothers' held positive attitudes toward talking about sex, mothers' reports of actual sex-related communications had almost no relationship to accuracy. Additionally, though birth order appears to play a significant role in children's accuracy, sibling sex composition showed much more mixed results. Future studies would benefit from the examination of multiple combinations of birth order and sex composition, as well as the additional complexity of birth spacing, which might shed further light on the dimensions of family structure most salient for the accurate perception of parental attitudes. Data containing both mothers' and fathers' attitudes and children's perceptions of those attitudes would likely also further our understanding of the role of family structure in children's accurate perceptions, and thus better understand the key mechanism through which parental attitudes are passed to the next generation.

Chapter IV: Maternal Influences on Marital Quality

Research about parental influences on adult children's marital quality has been fairly limited, and with few exceptions (for example, see Amato and Booth 1997), most intergenerational research on marital quality (in which marital quality of the second generation is the dependent variable) has focused on the influences of parental marital quality, and/or parental divorce on children's marital quality. In Chapter IV, I expand on this research by investigating the influence of mothers' family attitudes on their adult children's marital/cohabiting relationship quality. Parents' family attitudes have been found to influence other domains of their children's family formation behaviors, including marriage, cohabitation, and childbearing. Following in this tradition, I examine the role of maternal attitudes toward sex roles, cohabitation, and premarital sex on multiple dimensions of adult children's partner relationship quality. I use data from multiple waves of the Intergenerational Panel Study of Mothers and Children, which provides detailed measurement of mothers' and children's attitudes in 1980 (when the focal children were 18), and children's partner relationship quality in 1993, at age 31.

In general the results support my overarching hypothesis: parental attitudes that encourage marriage will be associated with higher partner relationship quality among children, and parental attitudes that discourage or delay marriage will be negatively related to partner relationship quality, whether they are married or cohabiting. Though some relationships were not statistically significant, the same maternal attitudes that tend to delay the entrance into marriage appear to also decrease children's relationship quality, both for cohabiting and marital relationships, when age at relationship formation is

controlled. The results highlight the role of parents as a source of social and material support to couples, above and beyond their influence on children's own attitudes.

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CHAPTER II.

CHILDREN'S PERCEPTIONS OF THEIR PARENTS' ATTITUDES: THE ROLE OF FAMILY CONTEXT

INTRODUCTION

Socialization is a key mechanism through which attitudes and values are transmitted from one generation to the next. Socialization has occurred when an individual has *internalized* the attitude or value in question—that is, it has been integrated into the individual's own system of beliefs (Zentner and Renaud 2007). Internalization is a two-step process (Furstenberg 1971; Cashmore and Goodnow 1985; Grusec and Goodnow 1994). First, the child must perceive the parent's message, which may be done with varying levels of accuracy. Second, the child may either accept or reject the parent's message, with acceptance resulting in internalization. Perceptions, then, play a crucial part in the intergenerational transmission of attitudes. In fact, multiple studies find that children's perceptions of their parents' attitudes (or values) are more important than the parent's actual attitudes for predicting the children's attitudes and related behaviors (Acock and Bengston 1980; Furstenberg 1967, 1971; Cashmore and Goodnow 1985; Dittus and Jaccard 2000; Jaccard and Dittus 2000; Fingerson 2005).

Thus, to better understand the process through which parents' attitudes and values are transmitted to the younger generation, it is important to understand how children develop their perceptions in the first place. If parents were explicit, clear, and consistent in providing messages about their values, children's perceptions of their parents' values

would almost always be accurate (Cashmore and Goodnow 1985; Grusec and Goodnow 1994); the fact that children's perceptions of their parents' values are generally not highly correlated with the parents' actual values (Acock and Bengston 1980; Whitbeck and Gecas 1988) suggests that: 1) parents are not always explicit, clear, and consistent in providing messages about their values, and 2) that children's perceptions are influenced by factors other than parental messages[1].

A great deal of empirical analyses predicting children's perceptions of mothers' attitudes focuses on the influence of parenting style and/or the parent-child relationship on value internalization (Grusec and Goodnow 1994; Middleton and Putney 1963; Rollins and Thomas 1979; Knafo and Schwartz 2003; Whitbeck and Gecas 1988). However, very little work on this topic has sought to study the effects of other parental characteristics on children's perceptions. One exception, a study by Thornton and Camburn (1987), examined the influence of parental attitudes, religion, marital and childbearing behaviors, and education and work on adolescents' perceptions of their parents' attitudes toward premarital sex. The authors found that children's perceptions of their mothers' attitudes were significantly influenced by multiple maternal characteristics, even when mothers' actual attitudes were controlled. This result implies that children's perceptions of their mothers' attitudes are informed in some part by their mothers' characteristics, independent of her actual, likely stated, attitudes. In the following pages, I will extend this work to examine the influence of family characteristics on children's perceptions of their mothers' marriage and childbearing preferences.

[1] Our ability to accurately measure parental values and children's perceptions of those values also plays a role in the discrepancy.

In this paper I examine the influence of family context early in life on children's perceptions of their mothers' attitudes toward marriage and childbearing in late adolescence. I draw from one of the central themes of the life course perspective, the principle of linked lives, which posits that individuals' life transitions and trajectories are influenced by the experiences of family and peers with whom their lives are embedded. Specifically, I look at early life measures of family integration, family religion, mother's socioeconomic status, and mother's marital/childbearing experience. I also consider gender differences in the relationship between family context and children's perceptions of their mothers' attitudes. I argue that children make inferences about their parents' attitudes and values from some combination of explicit messages *and* family context, which includes parental behavior, background, religion, friendships, and more. I use data from a 31-year, eight-wave longitudinal study of mothers and their children from the Detroit metropolitan area, which provides rich information about the parental and family characteristics hypothesized to influence children's perceptions of maternal attitudes.

BACKGROUND AND HYPOTHESES

Family Context

Although parental messages are clearly an important source of children's perceptions, children form perceptions of their parents' attitudes and preferences even when parental messages are absent or inconsistent. A key potential source of information about parental attitudes and preferences is *family context*. One of the central themes of the life course perspective is the principle of linked lives, or interdependence (Elder 1977; 1994), which emphasizes the importance of social

relationships across the life span. Just as early events and experiences in individuals' lives influence their later experiences and trajectories, individuals' trajectories are also influenced by the experiences of family and peers with whom their lives are embedded. From birth, children are embedded into a family context made up of their parents', siblings', and other family members' characteristics and behaviors, as well as characteristics of the family unit as a whole. These may include family traits such as the level of interactivity among family members, the frequency of conflict, whether or not both parents work outside the home, and socioeconomic status; as well as characteristics of individual family members, including religiosity, attitudes and values, political orientation, and past behaviors. The principle of interdependence suggests that these characteristics will help shape the opportunities and behaviors of individuals in the family. Indeed, empirical research has repeatedly affirmed the relationship between myriad measures of family context and children's subsequent attitudes and behaviors (Rossi and Rossi 1990; Amato and Booth 1997; Myers 1996; Davis and Friel 2001; Barber et al. 1999; Pearce and Axinn 1998; Yabiku et al. 1999; McLanahan and Bumpass 1988; Weinstein and Thornton 1989; Axinn and Thornton 1996; Thornton 1991; Barber 2001; Trent and South 1992).

I argue that one of the ways family context influences the opportunities and behaviors of children is by providing children with clues to their parents' attitudes and values, which help to inform children's perceptions of those parental values. For example, in the absence of any direct communication on the issue, a child might attribute to her mother a strong opposition to abortion because she attends religious services in a vocally pro-life congregation. Another child might perceive his mother as placing a high

value on large families because she herself had four children. I consider the influence on children's perceptions of multiple characteristics of the childhood family, which comprise four important domains: family integration, religion, socioeconomic status, and marital/childbearing experience.

Family Integration

One important dimension of family context is *family integration* (Yabiku, et al. 1999), or the degree to which the family unit forms the core of individuals' daily activities. According to the modes of social organization framework (Thornton and Fricke 1987; Thornton and Lin 1994), families exist on a continuum where one extreme represents the highest level of family integration, with all activities of life (production, recreation, education, relationships, etc.) organized by and around the family, and the other extreme represents the lowest level of family integration, with all activities of life organized around non-family units such as businesses, schools, and government agencies. Under this framework, a family in which the children are home-schooled would represent a much higher level of integration than a family in which the children are sent away to boarding school. Similarly, a family which earns its living on a family-run farm represents a higher level of integration than one in which both parents work outside of the home. Though the extremes at each end of the continuum represent ideal types, all families are theorized to fall somewhere in between.

Family integration is important to the formation of children's perceptions because the level of family integration provides children with information about parental values. That is, children will likely believe that parents cultivate a level of family integration that reflects their values. As perceived by their children, parents who foster a high level of

family integration probably place higher value on marriage and childbearing than parents who foster greater non-family organization.

Hypothesis 1: Children exposed to higher levels of family integration early in life perceive their mothers to more strongly prefer marriage and children for them than do children raised in less-integrated families.

Religion

Religion is an important dimension of family context because it is a potentially powerful source of parents' values, as well as a strong indicator to children about their parents' values. Both religious affiliation and religiosity are likely to provide clues to children about their mothers' family attitudes.

I consider two separate components of religious life: religious affiliation and religiosity. Religious affiliation provides important contextual clues to mothers' attitudes because of denominational differences in doctrine and values regarding family life. By the mid 1980s, many researchers had noted a pattern of convergence between Catholics and non-fundamentalist Protestants in many attitudinal and behavioral domains, including fertility, contraceptive use, fertility preferences, and childrearing values (Alwin 1984, 1986; Mosher and Hendershot 1984; Blake 1984; Westoff and Jones 1977; D'Antonio 1980). In a study of adolescents in 1980, however, Blake (1984) found that Catholic and non-Catholic teens significantly diverged in expected family size, and that the difference was even more pronounced when religiosity was taken into consideration. This suggests that by 1980 Catholicism was still effectively promoting larger family size compared to non-fundamentalist Protestants. During the same period in which Catholics and non-fundamentalist Protestants were becoming more alike in family attitudes and behaviors,

fundamentalist Protestants became more distinct (Thornton 1985), in that they continued to hold stronger preferences for early marriage and larger families than non-fundamentalist Protestants (Marcum 1981; Lehrer 2000). In contrast to other religious affiliations, Jews in the United States have consistently maintained lower levels of fertility (Della Pergolla 1980), as well as higher levels of educational attainment and labor force participation, characteristics which tend to delay their entrance into marriage and childbearing relative to members of other denominations (Lehrer 2000).

The differences in values that persist between religious denominations are likely to influence children's perceptions of their mothers' marriage and childbearing attitudes. Children whose mothers are fundamentalist Protestant will likely perceive their mothers as placing a higher value on marriage and childbearing, while children of Jewish, non-religious, and "other" mothers will likely perceive lower maternal preference for those behaviors, with Catholics and non-fundamentalist Protestants somewhere in the middle (Lehrer 2000; Thornton 1985). To the extent that most religions place high value on marriage and family life (Lehrer 2000), I expect that children whose mothers have higher levels of religiosity will perceive their mothers to more strongly prefer marriage and childbearing for their offspring.

> Hypothesis 2a: Children who grow up in fundamentalist Protestant families will perceive their mothers to more strongly prefer marriage and children for them than children raised in Catholic or non-fundamentalist Protestant families. Children who grow up in Jewish, non-religious, or other-religious families will perceive their mothers to less strongly prefer marriage and children for them than those raised in Catholic or non-fundamentalist Protestant families.

Hypothesis 2b: Children who grow up in more religious families will perceive their mothers to more strongly prefer marriage and children for them than children raised in less religious families.

Socioeconomic Status

Research on attitudes toward childbearing suggests that while U.S. attitudes toward childlessness have become more tolerant over the years (Thornton and Young-DeMarco 2001), low income women are much less accepting of childlessness than those with greater financial resources (Edin and Kefalas 2005; Sayer et al. 2003). Because low-income women place a high priority on childbearing, I expect that children of low income parents will perceive their mothers to be more disappointed if they never have children than children of higher-income parents. Likewise, I expect that children of more highly educated parents will perceive their mothers to be less disappointed if they never have children than those with less education, because parents with more education are likely to encourage education in their own children, which is more difficult to achieve in tandem with childbearing (Barber 2000; Rindfuss 1991; Rindfuss et al. 1987).

While the vast majority of Americans value marriage (Thornton and Young-Demarco 2001), I expect that children whose parents have lower socioeconomic status will perceive their mothers as less disappointed if they never marry than children whose parents have higher SES. One might expect children of higher SES backgrounds to perceive their mothers as holding lower preferences for marriage than children of lower SES backgrounds, due to the emphasis on higher education in higher SES households, which tends to delay marriage (Goldstein and Kenney 2001; Thornton, Axinn, and Xie 2007). However, as Goldstein and Kenney (2001) report, the historical trend of college

educated women ever-marrying at lower rates than non-college educated women has begun to reverse itself in the United States and elsewhere. While they still marry significantly *later* than their less-educated peers, college educated women born 1960-1964 (the same time period as my sample) are now forecast to ever-marry at higher rates (94%) than non-college educated women (89%). This is consistent with ethnographic work by Edin and Kefalas (2005), who found that for women of low socioeconomic status, marriage is particularly seen as a highly idealized state which should be delayed until job and financial security are obtained. This leads to later marriage and greater acceptance for never marrying, because for some, an acceptable level of financial security is never reached.

> Hypothesis 3: Children who grow up in families with higher socioeconomic status will perceive their mothers to *more strongly* prefer marriage but *less strongly* prefer childbearing for them than do children who grow up in families with lower socioeconomic status.

Marital/Childbearing Experience

Mother's marital and childbearing experiences are important indicators to children of their mothers' attitudes because children will likely infer that their mothers' preferences will align with their marital and childbearing behaviors. Cognitive dissonance theory (Festinger 1957) suggests that when an individual behaves in a manner that is inconsistent with his or her values, he or she will experience cognitive dissonance. Because cognitive dissonance is psychologically uncomfortable, the individual will attempt to eliminate the inconsistency by either changing the behavior, or the relevant attitude. For example, a young woman who believes that premarital sex is morally wrong

would likely become more tolerant of the behavior if she becomes sexually active before marriage. Children are likely to attribute this phenomenon to their parents as well, leading them to perceive that parents' attitudes will reflect parents' behavior. Therefore, I make the following hypotheses:

Hypothesis 4a: Children whose mothers married young, stayed married, were not pregnant at marriage, or had many children will think their mothers more strongly prefer marriage than children whose mothers married at an older age, had a marital disruption, were pregnant at marriage, or had fewer children.

Hypothesis 4b: Children whose mothers were pregnant at marriage, and those whose mothers had many children will perceive their mothers to more highly value grandchildren than children whose mothers were not pregnant at marriage or had smaller families.

Mothers' and Children's Actual Attitudes

Research on value socialization has repeatedly demonstrated that children's perceptions of their parents' attitudes are correlated much more closely with the children's actual attitudes than with parents' actual attitudes (Acock and Bengston 1980; Cashmore and Goodnow 1985; Furstenberg 1967, 1971; Whitbeck and Gecas 1988). In many of these studies the perceptions are assumed to be causally prior to children's actual attitudes. However, the relationship has also been shown to work in reverse. For example, in a study of intergenerational similarity in political and religious values, Acock and Bengston (1980) find that children attribute values to their parents in reference to their own values; that is, children practice "misattributed polarization," consistently

perceiving their parents' values to be more traditional or conservative than their own, and more traditional or conservative than the parents really are. Likewise, Thornton and Camburn (1987) attribute children's misperceptions of their parents' attitudes toward sex to the children's tendency to base their perceptions on their own attitudes. However, in contrast to "misattributed polarization," the authors assert that children perceive their parents attitudes toward sex to be *closer* to their own attitudes toward sex, perhaps to help justify their own attitudes and behaviors.

In addition, research suggests that parents are more likely to provide explicit verbal messages about values/attitudes which are highly important to them than for values on which they place less importance (Jennings and Niemi 1968; Cashmore and Goodnow 1985). Because I am interested determining the effects of family context which operate as clues for children's perceptions above and beyond explicit parental messages about preferences, and because family context likely influences both mothers' and children's attitudes, which in turn influence children's perceptions, all hypothesized relationships are expected to occur net of mothers' and children's actual attitudes.

Gender Differences

Because socialization is highly gendered (Rossi and Rossi 1990; Hoffman 1972), I expect family context to differentially influence daughters' and sons' perceptions of their parents' attitudes and values. Even from a very young age, women appear to be better able than men to decode others' nonverbal cues (Cross and Madson 1997; Hall 1978, 1984; Rosenthal and DePaulo 1979). Similarly, women are more accurate than men in evaluating others' personalities (Ambady et al 1995), likely due in part to their ability to understand nonverbal communication. If, on the average, men and women

differentially absorb nonverbal communication cues, it is likely that they will also differentially interpret family context clues when perceiving their parents' attitudes. This is consistent with Thornton and Camburn (1987), who find that the effects of early family characteristics such as mother's age at marriage and premarital pregnancy differed for daughters and sons, so that while both daughters and sons of mothers who experienced a premarital pregnancy or early marriage perceived their mothers to be more permissive about sex, the effect was stronger for daughters. Further, among Israeli teens, Knafo and Schwartz (2003) found that daughters were slightly more accurate than sons at perceiving their parent's values. The authors attributed the difference to girls' better knowledge of cultural norms and values in general. For this reason, I will model the effects of early family characteristics on perceptions of mothers' attitudes separately for sons and daughters.[2]

METHODS

Data

Intergenerational Panel Study of Mothers and Children

Data used in this analysis come from the Intergenerational Panel Study of Mothers and Children (IPS), a 31-year, eight-wave panel study of 1113 married White mothers and their children in the Detroit metropolitan area. The probability sample was drawn from birth records of mothers who gave birth to a first, second, or fourth child in 1961. The mothers were interviewed within a year of the focal child's birth, and then again in late 1962, 1963, 1966, 1977, 1980, 1985, and 1993. The focal children were also

[2] I do not make specific hypotheses as to the differential effects of each family characteristic on sons' and daughters' perceptions. However, I do test the statistical significance of the interaction between each characteristic and gender on perceptions (shown in Appendix A) to test whether a true gender difference exists for each dimension.

interviewed in 1980 (at age 18), 1985, and 1993. IPS has maintained high response rates throughout the study period, with 87% of the original 1113 mother-child pairs still in the sample in 1993 (Thornton, Axinn & Xie 2007).

IPS is uniquely suited to my analysis of the influence of family context on children's perceptions of their mothers' attitudes. Multiple waves of data about the mothers and children over the 31-year period provide rich information about the parental and family characteristics hypothesized to influence children's perceptions of maternal attitudes. Rather than relying on children's retrospective reports alone, data about family characteristics are collected prospectively from both the mothers and children, reducing measurement error due to faulty memories. Furthermore, the detailed measurement of family context very early in the children's lives is unmatched by other longitudinal studies.

Perhaps the most important disadvantage of IPS for my analyses is the sample's limitation to White mothers in the Detroit Metropolitan area in 1961, which limits the generalizability of my results racially, geographically, and temporally. Further, though it is highly desirable to be able to study the influences of both parents on children, I am limited to mother-child pairs only. Table 2.1 shows the means and standard deviations of measures used in the analysis.

(Table 2.1 about here)

Measures of Perceived and Actual Preferences for Marriage

To measure perceptions of their mothers' preferences for marriage, children were asked, "Suppose that things turn out so that you do not marry. How much would that bother your mother?" Answers choices included "not at all" (coded as 1), "some," "a

little," and "a great deal" (coded as 4). The mean perceived preference was 2.48, indicating that children leaned slightly toward the belief that their mothers would be bothered if they never married. There was no statistically significant difference between sons' and daughters perceptions.

Mothers' actual preferences for their children's marriage were measured with the question, "Suppose that things turn out so that (he/she) does not marry, would that bother you a great deal, some, a little, or not at all?" Answers were coded so that higher numbers reflect greater desire for the child's marriage. The mean attitude for mothers was 2.08. Children's perceptions of their mothers' marriage preferences were correlated with the mothers' actual preferences at $r = .26$ ($p<.0001$).

Children's preferences for their own marriage were measured by the question, "Suppose that things turn out so that you do not marry, would that bother you a great deal, some, a little, or not at all?" As with the mothers, answers were coded so that higher values reflected greater desire for marriage. The mean marriage preference for children was 2.66, though daughters had a significantly higher mean marriage preference (2.88) than sons (2.46, $p<.0001$). Children's marriage preference was correlated with perceptions of mothers' marriage preference at $r = .33$ ($p<.0001$), and with mothers' actual marriage preference at $r = .08$ ($p<.05$). This is consistent with the idea (as described above) that children perceive their parents attitudes through the lens of their own attitudes.

Measures of Perceived and Actual Preferences for Childbearing

Children's perceptions of their mothers' preferences for childbearing were measured with the question, "If it turns out that you do not have any children, how much

would that bother your mother? Answers ranged from "not at all" to "a great deal," with higher values indicating stronger preference for childbearing. The mean perceived preference was 2.58 for daughters and 2.46 for sons, though this difference was not statistically significant.

Mothers' actual preferences for their 18 year-olds' childbearing was measured with corresponding question, "If it turns out that (he/she) does not have any children, would that bother you a great deal, some, a little, or not at all?" Higher values indicate a stronger preference for childbearing. Mothers' mean actual childbearing preference for their teenager was 2.19, and was correlated with children's perceived preference at $r = .29$ ($p<.0001$).

The corresponding question measuring children's own childbearing preferences was not asked of the focal children until the 1985 interview. Therefore, to gauge children's childbearing preferences in 1980, I use the following more general childbearing attitude: “Do you feel that almost all married couples who can, ought to have children?” Answers were coded dichotomously, with a code of “1” indicating agreement. Thirty-nine percent of children agreed that all couples ought to have children. Children’s childbearing attitudes were not statistically significantly correlated with their mothers’ childbearing preferences. Daughters’ attitudes were correlated with their *perceptions* of their mothers’ preferences, at $r =.12$ ($p<.01$), while sons’ attitudes were correlated with their perceptions at $r =.25$ ($p<.0001$).

Respondents who were already married, or who already had children at the time of interview were dropped from analysis of the respective dependent variable (i.e. those with children were dropped from the analysis of perceived of childbearing preferences),

because they did not provide perceptions of their mothers' attitudes in the survey. This excluded 30 children who were married, and 16 who had already had a child at the time of the 1980 interview.

Measures of Family Integration

I rely on measures of family integration which reflect characteristics of mothers' relationships with her and her husbands' families of origin. Family integration is divided into two dimensions: family support networks and family social networks. Measures of these dimensions are created from questions asked in 1962, when the focal children were less than one year old.

Family support networks consist of help and resources received from relatives. It is captured by four questions asked in 1962, all of which are coded "1" if the mother reported receiving that type of assistance from relatives, and "0" if not. Mothers were asked if they and their husbands had "received large money gifts from parents or other relatives since you were married;" "advice on money or business matters;" or "help in getting a job." Mothers were also asked, "During the first week or so, when you were home with the baby, did you have someone besides you husband to take care of the family and the house? What relatives helped you?" To create a composite measure of family support networks, responses from the four questions were added together to create an index ranging from 0 to 4, with a code of 4 indicating that all four kinds of help were received.

Family social networks is a dimension of family integration which captures the family organization of social activities and interactions. This dimension is measured with two questions. The first question reads, "Do your relatives or your husband's relatives

have large family gatherings in which you participate on birthdays, anniversaries, holidays, or any other time?" Mothers were asked to indicate how often they attended such gatherings. Answer choices included "once a month or more (coded as 3)," "several times a year," "less often," or "never (coded as 0)." The second question asked, "Now, of all of your married friends and relatives, would you think of the three married women near your own age that you feel closest to and know best." The mothers were then asked to identify whether each of the three persons mentioned was a friend or relative. Responses were coded as a proportion of the total persons mentioned who were relatives; respondents received a code of 0 if none of the three were relatives, and a score of 1 if all three were relatives. To create a composite measure of family social networks, responses to both questions were standardized (mean=2, sd=1) then averaged to form an index with higher numbers indicating stronger family social networks.

Measures of Religion

Mother's religious preference was measured in 1962 with the question, "I want to ask you about your religious preference—that is, are you Protestant, Catholic, Jewish, or something else?" Answers were coded into dummy variables (coded as 0,1) for mainline (non-fundamentalist) Protestant, Fundamentalist Protestant, Catholic, and Jewish/Other/None. Protestant is used as the reference category in each model. Mother's religiosity is operationalized by frequency of religious attendance in 1962. Mothers were asked, "How often do you usually attend religious services—would you say several times a week, once a week, a few times a month, once a month, or less than once a month?" Answers were coded from 1 to 6 with higher numbers reflecting more frequent attendance. To measure grandmothers' religiosity, mothers were asked, "Now, thinking

of your mother at the time when you were growing up, how often did she talk about religious matters, or participate in religious activities with the family?" Answers choices were never (coded as 0), almost never, sometimes, or quite often (coded as 3).

Measures of SES

Socioeconomic status is measured by mother and father's average education level in 1962 and the family's average financial resources between 1961 and 1962. Average education level ranges from 3 (0-4 years) to 16 (16 years/college graduate). Average financial resources include the sum of total family income plus savings and assets for the year prior to interview (1962), and is coded in thousands of dollars. The top level of family income is capped at $15,000 or more.

Measures of Marital Experience

All mothers were married at the time the sample was drawn. Mother's age at first marriage ranges from 11 to 36, with a mean age of 20.39. Mother's marital experience measures marital events taking place between 1962 and 1980, and is coded into four dummy variables: stably married, widowed, divorced and remarried, and divorced and not remarried. Seventy-five percent of mothers were stably married from 1962 to 1980. Mother's pregnancy status at marriage was determined from birth and marriage records, and is coded as 0 or 1. Nineteen percent of mothers were pregnant at marriage. Mother's fertility is measured by the number of children ever born by 1977, when the focal children were 15 years old. Mean family size was 3.8 children.

Analytic Strategy

I use ordinary least squares (OLS) regression to model the effects of early family characteristics on children's perceptions of their mothers' marriage and childbearing

preferences. The use of OLS regression to model effects on ordinal scales is common practice in the social sciences (Allison 1999) and has been used in models of family attitudes measured on similar 4-point scales to those used in this analysis (Barber 2004).[3]

First, all four dimensions of family context are modeled together, with and without controls for mother's and child's actual marriage preference. I then model the effects of each dimension of family context individually, controlling for mothers' and children's actual preferences. I model the effects of family context on children's perceptions separately for daughters and sons, because models including interactions for gender (see Appendix A) indicated significant gender differences for several dimensions of family context.

RESULTS

(Table 2.2 about here)

Perceived Preferences for Marriage

Table 2.2 shows regression estimates of the relationship between family context and children's perceptions of their mothers' marriage preferences. Overall, the results indicate a significant influence of multiple dimensions of family context on children's perceptions of their mothers' marriage preferences, though these some of these influences differ for daughters and sons. Models 1 (daughters) and 7 (sons) show the effects of each dimension of family context, net of the other dimensions, but without controls for mothers' and children's actual marriage preference. Models 2 and 8 included these controls.

[3]Because I cannot assume equal distances between points on the attitude scales, I also estimated ordinal probit models (not shown), which produced very similar results to the OLS models presented .

Daughters

Model 1 shows significant negative effects of mother's marital experiences on children's perceptions of mother's marriage preference, but no statistically significant relationship between children's perceptions and family integration, religion, or SES. However, when controls for mothers' and children's actual marriage preferences are added (model 2), we find stronger effects of mother's religious affiliation, parents' average education, average financial resources, and mother's divorce. These differences are likely due in most part to the improved predictive power of the model as a whole resulting from the addition of controls for mothers' and children's actual attitudes. In addition, the larger coefficients for religious affiliation and maternal divorce suggest a suppressive effect of mother's and children's actual attitudes (MacKinnon et al. 2000).

Among daughters, mothers' religious affiliation, age at first marriage, and experience of divorce lead children to perceive their mothers as less disappointed if they never marry. In contrast, higher socioeconomic status leads daughters to believe their mothers would be more disappointed if they never marry. This is consistent with the trends reported by Goldstein and Kinney (2001) and Edin and Kefalas (2005), wherein college-educated women, while marrying later, are now projected to ever-marry at higher rates than their less-educated peers; and where low income women strive to achieve economic security before allowing themselves to marry—a goal which many never reach. In models 2 and 4 we see that net of the mothers' and children's actual preferences, children of Jewish, non-religious, and "other" mothers perceive their mothers to be less disappointed if they never marry, compared to children of mainline Protestant mothers.

Children of fundamentalist Protestant and Catholic mothers do not significantly differ from mainline Protestants.

Models 2 and 6 show that mothers who married at older ages have daughters who perceive them to have weaker marriage preferences than do mothers who married at younger ages. Model 6 also shows relatively strong negative effects of divorce on daughters' perceptions of their mothers' marriage preferences, as daughters whose mothers divorced and remarried, and those whose mothers divorced and did not remarry believe their mothers to be less disappointed if they never marry than those whose mothers remained stably married. Interestingly, the coefficient for divorced and remarried mothers (-.46) is nearly twice as large as that of divorced and not-remarried mothers (-.27), suggesting that daughters of remarried mothers believe their mothers' marriage preferences are even weaker than do daughters of divorced and not-remarried mothers, an unexpected result.

Sons

Unlike with daughters, models of sons' perceptions of their mothers' marriage preferences show primarily confounding effects of mothers' and children's actual attitudes on the relationship between family context and perceptions. Model 7 shows a statistically significant positive relationship between family social networks and perceptions of marriage preference, as well as relatively large negative effects of maternal divorce and premarital pregnancy on sons' perceptions of marriage preference. However, when controls for mother's and child's actual marriage preferences are added (model 8), those relationships are no longer statistically significant, indicating that those dimensions of family context influence sons' perceptions through actual attitudes.

Net of both mothers' and children's actual marriage preferences, Table 2.2 shows that among sons, family support networks had a statistically significant influence on children's perceptions of their mothers' marriage preferences. Specifically, sons from families with stronger family support networks perceived their mothers to have stronger marriage preferences than did sons from families with weaker family support networks.

Mothers' religious affiliation and religiosity both worked in the opposite direction than hypothesized. As shown in model 8, sons of fundamentalist Protestant mothers were *less* likely to perceive their mothers to be disappointed if they never marry than were sons of mainline Protestant mothers, and the coefficient is relatively large (-.29). Sons of more religious mothers also perceived their mothers to have weaker marriage preferences than sons of less religious mothers. More religious mothers and fundamentalist Protestant mothers might be more likely than their counterparts to believe that marriage is God's will, or part of a divine plan (Marcum 1986), and therefore less likely to express their preference to their sons.

Gender Differences

Results of a model including the full sample with interactions for gender (Appendix A) indicated that the effects of mothers' preference for marriage and mothers' divorce/remarriage were significantly different for daughters and sons.

(Table 2.3 about here)

Perceived Preferences for Childbearing

Table 2.3 shows regression estimates of the effects of family context on children's perceptions of their mothers' childbearing preferences. As with marriage preferences, the

relationship between some individual dimensions of family context and children's perceptions differs for sons and daughters.

Daughters

Model 1 shows significant positive relationships between mother's religious affiliation and parental education and daughters' perceptions of their mothers' childbearing preferences. Average financial resources, and most measures of mother's marital experiences are negatively associated with daughters' perceptions. However, when controls for mothers' and children's actual childbearing preferences are added in model 2, the effects of parental education and mother's children ever born are no longer statistically significant, indicating that these relationships work by influencing actual attitudes. The effects of mother's religious affiliation and divorce/remarriage are amplified by the addition of controls for actual attitude, indicating a suppressive effect similar to that seen in previous models.

Overall, Table 2.3 shows that, net of mothers' and children's actual preferences, mothers' religious affiliation, socioeconomic status, and marital experience all have statistically significant effects on daughters' perceptions of their mothers' childbearing preferences.[4] More specifically, daughters of Catholic mothers are more likely than daughters of mainline Protestant mothers to believe their mothers will be disappointed if they never have children (model 2). Model 5 shows that family financial resources has a small negative effect on daughters' perceptions of their mothers' childbearing preferences, with greater financial resources resulting in lowered perceptions of mothers'

[4] Model 3 shows a marginally significant positive effect of family social networks on daughters' perceptions of their mothers' childbearing preferences. However, when all four dimensions of family context are included in the model (model 2), this effect is not significant.

disappointment. Mothers' age at marriage decreases daughters' perceptions of their mothers' disappointment (model 6), as does mothers' divorce. Model 2 shows that family support networks and mothers' fertility have negative influences on daughters' perceptions of their mother's childbearing preferences, both of which are in the opposite direction than hypothesized.

Sons

Among sons, Table 2.3 shows that mothers' religious affiliation and average financial resources have statistically significant influences on sons' perceptions of their mother's childbearing preferences, net of mothers' and sons' actual preferences, and all other dimensions of family context (model 8). Specifically, sons of Catholic mothers perceive their mothers to be more disappointed if they never have children than do sons of mainline Protestant mothers. Family financial resources has a negative effect on sons' perceptions; sons from families with greater financial resources perceive their mothers to be less disappointed if they never have children than sons from families with fewer financial resources. Family social networks has a marginally significant positive effect on sons' perceptions of their mothers' childbearing preferences, net of actual preferences and all other dimensions of family context. As in Table 2.2, Table 2.3 shows negative effects of mothers' religiosity on sons' perceptions of their mothers' childbearing preferences, meaning that sons of more religious mothers perceive their mothers to be less disappointed if they never have children than do sons of less religious mothers. This is opposite of the hypothesized direction. As with mothers' marriage preferences, this relationship might be attributable to a stronger belief in God's will among more religious mothers (Marcum 1986), who may therefore be less likely to have a preference, or to express it to their sons.

Gender Differences

Results of a model including the full sample with interactions for gender (Appendix A) indicated that daughter/son differences were statistically significant for the child's childbearing attitude, family support networks, and mothers' divorce without remarriage.

DISCUSSION

In this paper, I sought to expand the literature on the sources of children's perceptions of their parents' attitudes by addressing the following research question: how do early family characteristics influence children's perceptions of their mothers' attitudes toward family behaviors later in life?

The results show that among daughters, mothers' religious affiliation, age at first marriage, experience of divorce and socioeconomic status all significantly influence perceptions of mothers' marriage preferences, even when mothers' and daughters' actual preferences are controlled. The same dimensions of family context influence daughters' perceptions of their mothers' childbearing preferences.

Among sons, only family support networks influenced perceptions of mothers' marriage preferences as hypothesized. In contrast, mothers' religious affiliation and religiosity influenced sons' perceptions of their mothers' marriage preference in the opposite direction as hypothesized, with sons of fundamentalist Protestant mothers, and sons of more religious mothers perceiving their mothers to be less disappointed if they never marry than sons of mainline Protestant and less religious mothers. Sons of more religious mothers also perceived their mothers to be less disappointed if they never have children than did sons of less religious mothers, which was also opposite the

hypothesized direction. Other dimensions which significantly influenced sons' perceptions of their mothers' childbearing preferences included family social networks, mothers' religious affiliation, and socioeconomic status.

Results were generally similar across dependent variables, so that dimensions of family context which influenced perceptions of mothers' marriage preferences similarly influenced perceptions of mothers' childbearing preferences. There were a few exceptions, however.[5] Somewhat surprisingly, mothers' Catholicism (as compared to non-fundamentalist Protestants) was not significantly related to children's perceptions of their mothers' marriage preferences, though it had the expected effect on children's perceptions of their mothers' childbearing preferences. This result may be indicative of the so-called "Catholic-Protestant convergence" (Alwin 1984, 1986; Mosher and Hendershot 1984; Blake 1984; Westoff and Jones 1977; D'Antonio 1980), wherein researchers have noted a decline in differences between Catholics and mainline Protestant on a number of family attitudes and values. By the early 1980s, however, Catholics still diverged from non-fundamentalist Protestants in their promotion of larger family size (Blake 1984), which is consistent with my results. Other evidence has suggested that Catholics tend to be less pro-marriage than those in other religious affiliations; using the same data, Thornton and colleagues (2007) found that, controlling for religiosity and family size preferences, Catholics entered marital unions at lower rates than members of other religions.

This analysis makes an important contribution to the literature on children's perceptions of their parents' attitudes because it demonstrates the importance of factors

[5] One exception, SES, was hypothesized to work differently for perceptions of marriage and childbearing preferences.

beyond parents' explicit messages for the development of perceptions. The effects of family context I find all operate independently of mothers' and children's actual preferences; this suggests that mothers aren't directly or clearly communicating their marital and childbearing preferences. If that were the case mothers' actual attitudes should account for most of the variation in children's perceptions. Instead, children appear to infer their mothers' attitudes from some combination of what she says, how she behaves, her background, her religion, who she hangs around with, etc—in short, from a combination of messages and context. Because my analysis is limited to only four dimensions of family context, most of which had relatively small effects, the study of children's perceptions would benefit from further explorations of other dimensions of family context, especially the characteristics of other important family members, including fathers and siblings.

Limitations:

As previously stated, the key limitations of this study result from the limits to generalizability, in terms of geography, temporality, and race/ethnicity. The sample is limited to White mothers in the Detroit Metropolitan area in 1961, which presents significant challenges. Geographic location is perhaps the least worrisome of the sample's limitations. Several studies using this data have found results that generally were consistent with national studies (Thornton and Axinn 1996; Thornton, Freedman, and Axinn 2002), and the population of Michigan itself appears to demonstrate marital and childbearing behaviors which align with national averages (Lesthaeghe and Neidert 2006; Thornton, Axinn, and Xie 2007). There is no theory to suggest that Michigan's value socialization behaviors also do not also fall in this middle range.

The sample's limitations in terms of race and temporality are more troublesome. Because the sample included only White mothers and children, my results cannot be generalized to other race/ethnic populations. It is highly possible that the specific dimensions of family context measured in this analysis work differently among different racial/ethnic groups, and it's also likely that dimensions of family context which are important for other groups are missing from my analysis. However, in terms of the overall message, that children use family context as clues to their parents' attitudes and values, I have no theoretical reason to suspect racial/ethnic differences in this element of the socialization process. Temporal generalizability may also be an issue for this study. The cohort of sample children were all born in 1961, and grew up in a period of great change in family attitudes and behaviors (Thornton, Axinn, and Xie 2007). Therefore, their socialization experiences may differ significantly from previous and subsequent cohorts. Additional research with other cohorts of children will be necessary to determine whether these effects are not just a result of growing up in the 1960s and 70s.

Certainly further study of the influences on children's perceptions of their parents' attitudes and values would benefit from more recent, nationally representative data, and from measures of characteristics from multiple family members, in addition to mothers. However, in the absence of this ideal, the strengths of IPS are notable; separate interviews from both mothers and children in multiple waves, and detailed measurement of multiple dimensions of family context have provided the opportunity to gain new insight into the process by which children come to perceive their parents' values. And understanding children's perceptions is an important part of understanding how attitudes and values are transmitted across generations.

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Table 2.1: Means and Standard Deviations of Measures Used in Analysis

	All					Daughters			Sons		
Variable	N	Mean	SD	Min	Max	N	Mean	SD	N	Mean	SD
Marital Perceptions and Attitudes											
Kid thinks bother mother if no marry (4=great deal)	889	2.48	0.99	1	4	421	2.54	0.96	452	2.44	1.02
Bother mother if child doesn't marry (4=great deal)	920	2.08	1.06	1	4	439	2.02	1.05	481	2.13	1.07
Kid's 1980 marriage preference (4=great deal)	863	2.66	1.09	1	4	408	2.88	1.04	437	2.46	1.09
Childbearing Perceptions and Attitudes											
Kid thinks bother mother if no gkids (4=great deal)	904	2.51	0.99	1	4	435	2.58	1.00	453	2.46	0.98
Bother mother if child has no kids (4=great deal)	920	2.19	1.06	1	4	438	2.18	1.09	482	2.20	1.07
Kid's 1980 fertility attitude (all couples ought to have kids)	934	0.39	0.49	0	1	450	0.36	0.48	464	0.41	0.49
Early Family Integration (1962)											
Family Support Networks	1113	1.08	0.89	0	4	464	1.10	0.89	489	1.06	0.87
Family Social Networks	1113	2	0.74	0.45	3.85	464	2.05	0.72	489	1.98	0.74
Religion (1962)											
Mother Mainline (non-Fundamentalist) Protestant	1113	0.30	0.46	0	1	464	0.30	0.46	489	0.30	0.46
Mother Fundamentalist Protestant	1113	0.12	0.33	0	1	464	0.13	0.34	489	0.10	0.30
Mother Catholic	1113	0.52	0.5	0	1	464	0.51	0.50	489	0.56	0.50
Mother Jewish/other/none	1113	0.05	0.22	0	1	464	0.06	0.24	489	0.04	0.20
Mother religiosity	1113	3.62	1.64	1	6	464	3.74	1.63	489	3.64	1.63
Grandmother's religiosity	1113	2.25	0.91	0	3	464	2.27	0.88	489	2.23	0.92
SES											
Mother and Father average education (1962)	1113	12.11	1.9	3	16	464	12.28	1.82	489	12.25	1.97
Average financial resources (1961-1962)	1091	4.55	2.83	0.25	16.25	457	4.59	2.73	483	4.70	2.92
Marital Experience											
Mother's age at marriage	1113	20.39	3.11	11	36	464	20.44	3.05	489	20.51	3.13
Mother stably married between 1962 and 1980	966	0.75	0.43	0	1	462	0.76	0.43	488	0.75	0.44
Mother widowed (1962-1980)	966	0.04	0.2	0	1	462	0.05	0.21	488	0.04	0.19
Mother divorced and remarried (1962-1980)	966	0.09	0.29	0	1	462	0.10	0.29	488	0.09	0.29
Mother divorced and not remarried (1962-1980)	966	0.11	0.31	0	1	462	0.10	0.30	488	0.12	0.33
Mother pregnant at marriage	1113	0.19	0.4	0	1	464	0.20	0.40	489	0.17	0.38
Mother's Children ever born by 1977	992	3.8	1.48	1	10	464	3.73	1.39	489	3.85	1.56

Table 2.2: OLS Regression Estimates of the Effects of Family Context on Children's Perceptions of Mother's Marriage Preferences

	Child's perception of mother's marriage preference (4=very disappointed)											
	Daughters						Sons					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Early Family Integration (1962)												
Family support networks	.04	.04	.05				.12*	.12*	.10*			
	(.73)	(.82)	(.91)				(2.03)	(2.18)	(1.88)			
Family social networks	.01	.02	.02				.09+	.06	.05			
	(.18)	(.29)	(.30)				(1.41)	(1.00)	(.76)			
Early Parental Characteristics (1962)												
Religion [a]												
Mother fundamentalist Protestant	-.06	-.13		-.16			-.21	-.29		-.26		
	(-.39)	(-.87)		(-1.08)			(-1.18)	(-1.67)		(-1.55)		
Mother Catholic	.08	-.02		-.06			-.06	.02		-.01		
	(.65)	(-.16)		(-.51)			(-.46)	(.13)		(-.05)		
Mother Jewish/other/none	-.14	-.34*		-.26+			.08	.02		.09		
	(-.67)	(-1.69)		(-1.38)			(.29)	(.09)		(.39)		
Mother's religiosity	-.04	-.03		-.00			-.04	-.06		-.06		
	(-1.16)	(-.74)		(-.13)			(-1.20)	(-1.63)		(-1.76)		
Grandmother's religiosity	-.01	-.01		-.04			.00	-.00		.01		
	(-.14)	(-.27)		(-.73)			(.07)	(-.02)		(.24)		
SES												
Mother and father avg. education	.03	.04+			.02		-.00	-.00			-.00	
	(1.02)	(1.29)			(.62)		(-.09)	(-.02)			(-.01)	
1961-62 Avg. financial resources	.02	.03+			.02		.02	.01			.01	
	(1.13)	(1.44)			(.88)		(.96)	(.63)			(.30)	
Marital Experience												
Mother's age at first marriage	-.04**	-.05**				-.04**	-.02	-.02				-.01
	(-2.42)	(-2.83)				(-2.49)	(-1.28)	(-1.02)				(-.84)
Mother widowed 1962-1980[b]	-.29	-.05				-.10	-.25	-.04				.02
	(-1.20)	(-.21)				(-.43)	(-1.01)	(-.19)				(.07)
Mother divorced, remarried[b]	-.36*	-.47**				-.46**	-.10	-.06				-.02
	(-2.04)	(-2.76)				(-2.75)	(-.54)	(-.34)				(-.12)
Mother divorced, not remarried[b]	-.38**	-.26+				-.27*	-.33*	-.08				-.01
	(-2.37)	(-1.64)				(-1.84)	(-2.11)	(-.53)				(-.09)
Mother pregnant at marriage	.00	.04				.01	-.20+	-.09				-.07
	(.07)	(.32)				(.07)	(-1.53)	(-.70)				(-.59)
Mother's children ever born	-.05+	-.05				-.04	-.04	-.03				-.04
	(-1.38)	(-1.40)				(-1.25)	(-1.17)	(-.97)				(-1.33)
Controls												
Mother's 1980 Marriage Preference		.17***	.18***	.18***	.17***	.17***		.26***	.27***	.26***	.26***	.26***
		(3.89)	(4.21)	(4.21)	(4.04)	(3.89)		(5.58)	(6.25)	(6.00)	(6.08)	(5.80)
Child's 1980 Marriage Preference		.29***	.28***	.28***	.29***	.28***		.27***	.28***	.28***	.27***	.28***
		(6.53)	(6.59)	(6.52)	(6.64)	(6.52)		(6.14)	(6.60)	(6.75)	(6.28)	(6.48)
n	413	394	401	401	395	400	445	421	428	428	422	427
r^2	.05	.19	.15	.15	.15	.17	0.045	.20	.19	.19	.17	.18

Notes: T-ratios in parentheses.

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Comparison group is non-fundamentalist Protestant

[b] Comparison group is stably married 1962-1980

Table 2.3: OLS Regression Estimates of the Effects of Family Context on Children's Perceptions of Mother's Childbearing Preference

Child's perception of mother's childbearing preference (4=very disappointed)

	Daughters						Sons					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Early Family Integration (1962)												
Family support networks	-.06	-.07	-.03				.04	.04	.04+	.		
	(-1.13)	(-1.33)	(-.60)				(.74)	(.80)	(1.47)			
Family social networks	.06	.06	.10+				.04	.09+	.06			
	(.92)	(.87)	(1.48)				(.65)	(1.43)	(1.10)			
Early Parental Characteristics (1962)												
Religion[a]												
Mother fundamentalist Protestant	-.04	-.03		.05			.14	.20		.22+		
	(-.24)	(-.19)		(.34)			(.78)	(1.20)		(1.40)		
Mother Catholic	.19+	.21*		.18+			.28*	.31**		.28**		
	(1.48)	(1.68)		(1.48)			(2.21)	(2.65)		(2.51)		
Mother Jewish/other/none	.11	.10		.02			.31	.21		.16		
	(.50)	(.46)		(.10)			(1.20)	(.89)		(.69)		
Mother's religiosity	-.01	-.01		.01			-.04	-.05		-.06		
	(-.32)	(-.18)		(.17)			(-.98)	(-1.61)		(-1.91)		
Grandmother's religiosity	-.00	.03		-.00			.01	-.02		-.02		
	(-.04)	(.56)		(-.08)			(.09)	(-.47)		(-.41)		
SES												
Mother and father avg. education	.04+	.01			.00		-.00	.02			.01	
	(1.46)	(.37)			(.01)		(-.01)	(.88)			(.22)	
1961-62 Avg. financial resources	-.03+	-.03+			-.03+		-.03+	-.03*			-.03*	
	(-1.62)	(-1.51)			(-1.46)		(-1.47)	(-1.76)			(-2.09)	
Marital Experience												
Mother's age at first marriage	-.05**	-.04*				-.04**	-.01	-.01				-.02
	(-2.66)	(-2.30)				(-2.51)	(-.56)	(-.89)				(-1.11)
Mother widowed 1962-1980[b]	-.22	-.12				-.12	.09	.19				.08
	(-.90)	(-.51)				(-.53)	(.35)	(.80)				(.35)
Mother divorced, remarried[b]	-.24+	-.23+				-.25+	-.03	.06				.02
	(-1.35)	(-1.32)				(-1.46)	(-.18)	(.38)				(.13)
Mother divorced, not remarried[b]	-.38*	-.42**				-.38**	-.02	.15				.21
	(-2.27)	(-2.63)				(-2.45)	(-.13)	(1.07)				(1.52)
Mother pregnant at marriage	-.04	-.04				-.02	-.14	-.11				-.06
	(-2.07)	(-.37)				(-.14)	(-1.10)	(-.93)				(-.55)
Mother's children ever born	-.07*	-.06				-.05	-.03	-.03				-.03
	(-2.07)	(-1.67)				(-1.29)	(-1.11)	(-.94)				(-.93)
Controls												
Mother's 1980 Childbearing Preference		.28***	.29***	.29***	.29***	.27***		.27***	.25***	.26***	.25***	.26***
		(6.44)	(6.78)	(6.74)	(6.72)	(6.35)		(6.07)	(5.90)	(6.03)	(5.90)	(5.91)
Child's 1980 Childbearing Attitude		.16+	.19*	.18*	.17*	.20*		.48***	.48***	.46***	.46***	.49***
		(1.59)	(2.01)	(1.90)	(1.75)	(2.01)		(5.21)	(5.45)	(5.22)	(5.18)	(5.41)
n	427	413	421	421	415	419	446	440	447	447	441	446
r^2	.05	.15	.11	.12	.12	.13	.03	.16	.14	.14	.14	.14

Notes: T-ratios in parentheses.

[a] Comparison group is non-fundamentalist Protestant

[b] Comparison group is stably married 1962-1980

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

Appendix A.

Table 2.4: OLS Regression Estimates of the Effects of Family Context-Gender Interactions on Children's Perceptions of their Mothers' Preferences (Direction and Statistical Significance Only)

Respondent is Female	NS	pos+
Mother's 1980 Marriage Preference	pos***	
Interaction with Gender	neg+	
Child's 1980 Marriage Preference	pos***	
Interaction with Gender	NS	
Mother's 1980 Childbearing Preference		pos***
Interaction with Gender		NS
Child's 1980 Childbearing Attitude		pos***
Interaction with Gender		neg**
Early Family Integration (1962)		
Family support networks	pos*	NS
Interaction with Gender	NS	neg+
Family social networks	NS	pos+
Interaction with Gender	NS	NS
Early Parental Characteristics (1962)		
Religion [a]		
Mother fundamentalist Protestant	neg*	NS
Interaction with Gender	NS	NS
Mother Catholic	NS	pos**
Interaction with Gender	NS	NS
Mother Jewish/other/none	NS	NS
Interaction with Gender	NS	NS
Mother's religiosity	neg*	neg+
Interaction with Gender	NS	NS
Grandmother's religiosity	NS	NS
Interaction with Gender	NS	NS
SES		
Mother and father avg. education	NS	NS
Interaction with Gender	NS	NS
1961-62 Avg. financial resources	NS	neg*
Interaction with Gender	NS	NS
Marital Experience		
Mother's age at first marriage	NS	NS
Interaction with Gender	NS	NS
Mother widowed 1962-1980[b]	NS	NS
Interaction with Gender	NS	NS
Mother divorced, remarried[b]	NS	NS
Interaction with Gender	neg*	NS
Mother divorced, not remarried[b]	NS	NS
Interaction with Gender	NS	neg**
Mother pregnant at marriage	NS	NS
Interaction with Gender	NS	NS
Mother's children ever born	NS	NS
Interaction with Gender	NS	NS

Notes: T-ratios in parentheses.

[a] Comparison group is non-fundamentalist Protestant

[b] Comparison group is stably married 1962-1980

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

CHAPTER III.

PARENTAL COMMUNICATION, FAMILY STRUCTURE, AND THE ACCURACY OF CHILDREN'S PERCEPTIONS OF THEIR MOTHER'S ATTITUDES TOWARD SEX

INTRODUCTION

Socialization is a key process through which attitudes and values are transmitted from one generation to the next. Socialization has occurred when an individual has *internalized* the attitude or value in question—that is, it has been integrated into the individual's own system of beliefs (Zentner and Renaud 2007). While the term "internalization" is most often used in reference to the attainment of moral or prosocial values, a growing body of literature has applied the concept to a range of attitudes, cultural values, and behavioral motivations (for a comprehensive review, see Grolnick et al. 1997). These include the internalization of behaviors such as completing schoolwork (Ryan and Connell 1989), performing household chores (Grolnick and Ryan 1989), losing weight (Williams et al. 1996), and, more recently, the occurrence and timing of sexual behaviors among adolescents (Dittus and Jaccard 2000; Dittus et al. 1997; Fingerson 2005; Jaccard and Dittus 2000; Seiving et al. 2000).

The intergenerational socialization of adolescent sexual behavior is of particular interest to researchers and public health professionals concerned with the risks of sexual activity at young ages and to social psychologists hoping to tease apart the complex relationships between parents' preferences, parenting styles, and behaviors, and children's outcomes. The relatively recent availability of nationally representative, multi-

wave data from the National Longitudinal Study of Adolescent Health has generated an opportunity to study parental influences on adolescent sexual behavior in never-before-seen detail. Researchers have used these data, which include measures collected from both children and their parents, to examine the role of multiple sources of parental influence on adolescent sexual behavior (for examples, see Chen and Thompson 2007; Cleveland and Gilson 2004; Cox 2007; Frisco 2005; Kapinus and Gorman 2004; Lam et al. 2008; Majumdar 2006; McNeely et al. 2002; Menning et al. 2007; Ream and Savin-Williams 2005; Regnerus and Luchies 2006). Within this body of work, several studies have demonstrated the importance of teens' perceptions of their parents' attitudes for predicting subsequent sexual behavior (Dittus and Jaccard 2000; Dittus et al. 1997; Fingerson 2005; Jaccard and Dittus 2000; Seiving et al. 2000). I contribute to the study of teens' perceptions of their parents' attitudes in this paper by exploring the correlates of children's *accuracy* in perceiving their mothers' attitudes toward sex, including mothers' reports of her attitudes toward communicating about sex, and the frequency of sex-related communication with the child, as well as elements of family structure that are theorized to influence the content, delivery, receipt, and interpretation of parental messages—namely, sibling composition and birth order. As shown below, the accuracy of children's perceptions plays a key role in the intergenerational transmission of attitudes and behaviors.

THEORETICAL BACKGROUND

One of the most influential theoretical frameworks in the study of intergenerational transmission of attitudes and values is the Goodnow two-step model of intergenerational agreement (Cashmore and Goodnow 1985; Goodnow 1992; Grusec and

Goodnow 1994), in which the author and colleagues argue that the internalization of parental values takes place in two steps. First, the child must *perceive* the parent's message, which may be done with varying levels of accuracy. Second, the child may either *accept or reject* the parent's message, with acceptance resulting in internalization. Thus, a lack of congruence between generations can result either from inaccurate perceptions or from a rejection of the parental message. Perceptions, then, play a crucial part in the intergenerational transmission of attitudes. For example, Okagaki and colleagues (1999) found that young adults' perceptions of their parents' religious beliefs was a key mediator in the relationship between parents' actual religious beliefs and the young adults' own religious beliefs. Similar results were reported for beliefs about ethnic identity (Okagaki and Moore 2000). In fact, research has consistently shown that children's perceptions of their parents' attitudes (or values) are more important than the parents' actual attitudes for predicting the children's attitudes and related behaviors (Acock and Bengston 1980; Cashmore and Goodnow 1985; Dittus and Jaccard 2000; Fingerson 2005; Furstenberg 1967, 1971; Jaccard and Dittus 2000). This relationship has repeatedly been borne out in the realm of adolescent sexual behavior. Fingerson (2005), for example, found that the more sexually liberal teens perceive their mothers, the more likely they are to have had sex and to have had more sex partners, while the mothers' actual opinions were not related to their teens' sexual behavior. Using the same data, Dittus and Jaccard (2000) found that teens' perceptions of their mothers' disapproval of sexual intercourse more consistently predicted teens' subsequent sexual behavior and pregnancy than did the mothers' actual disapproval. Likewise, Seiving et al. (2000) found that maternal disapproval of sex had no independent effect on timing of first sex

when teens' perceptions were held constant, while teens' perceptions of their mothers' disapproval delayed the initiation of sexual activity.

Accuracy as a Moderator

While the perception of parental values is the key first step in the process of internalization, values and attitudes (and their related behaviors) will generally not be passed from one generation to the next if those perceptions are not accurate. Over a decade before the Goodnow two-step model was introduced, Furstenberg (1971) illustrated this point with a study of parent-child agreement in mobility orientation. Furstenberg found that children who accurately perceived their parents' educational goals had a high likelihood of sharing their parents' goals. In contrast, where parents and children disagreed on educational goals, children's inaccurate perceptions of their parents' goals were a major contributor. Since then, accuracy of perceptions, as a moderating variable in the relationship between perceptions and value congruence, has received increased attention in research on the intergenerational transmission of attitudes and values (Zentner and Renaud 2007). Like Furstenberg, Smith (1982) found that children who accurately perceived their parents' educational goals were more likely to share their parents' goals than were children whose perceptions were inaccurate. In addition, Whitbeck and Gecas (1988) found evidence for the importance of accurate perceptions for a range of parental values; the more accurate children were when perceiving their parents' values, the more likely they were to share those values.

In this paper I examine two sets of correlates related to accuracy of adolescents' perceptions of their mothers' attitudes toward sex: maternal sex-related communication, and family structure.

Sex-Related Communication and Accuracy

Few empirical studies have looked specifically at the relationship between parental messages and accuracy. In one example, frequent discussion of religious beliefs was positively correlated with accuracy among daughters (Okagaki and Bevis 1999). In another study, the authors found that among a group of Israeli teens, those who perceived their parents' value messages as consistent over time more accurately perceived their parents' values. However, these authors found that the frequency of value discussions was not related to accuracy of perceptions (Knafo and Schwartz 2003).

According to the Goodnow model, the accuracy of children's perceptions of their parents' attitudes is theorized to be a function of the clarity or redundancy of the parental message (Cashmore and Goodnow 1985; Furstenberg 1971; Grusec and Goodnow 1994). This suggests that children will more accurately perceive their parents' attitudes if the parent clearly and directly declares the attitude, and if this declaration is made repeatedly, giving the child multiple opportunities to hear, absorb, and remember it. Thus, I hypothesize that teens whose parents' are more favorably inclined toward sex-related communication (indicating a greater willingness to speak frankly about sex in general, and/or their personal attitudes toward sex), and whose parents communicate about sex more frequently, will more accurately perceive their parents' attitudes toward sex.

> Hypothesis 1: Teens whose mothers' hold a positive orientation toward sex-related communication will more accurately perceive their mothers' attitudes toward sex than teens whose mothers hold a negative orientation toward sex-related communication.

Hypothesis 2: Teens whose mothers talk to them about sex more often will more accurately perceive their mothers' attitudes toward sex than teens whose mothers talk to them about sex less often.

Hypothesis 3: Teens whose mothers talk to them about birth control more often will more accurately perceive their mothers' attitudes toward sex than teens whose mothers talk to them about birth control less often.

This last hypothesis is consistent with the idea that higher levels of parental communication about sex result in greater accuracy in perceptions. However, some previous research has indicated that teens' perceptions of their parents' attitudes toward *birth control* are actually associated with less accurate perceptions of parents' attitudes toward sex. For example, Dittus and Jaccard, (2000) found that children who believed their mothers approved of the use of birth control were more likely to underestimate their mothers' disapproval of sex than were children who believed their mothers disapproved of birth control. These teens seemed to equate mothers' approval of birth control with tacit approval of sex, thus underestimating mothers' actual disapproval of sex. Thus, it is possible that parents' communication about birth control may be related to the accuracy of teens' perceptions of their parents' attitudes toward sex in the opposite direction than hypothesized here.

Family Structure and Accuracy

Assuming clear and redundant parental messages, certain elements of the family structure itself may influence the accuracy with which children perceive parental messages about sex. In particular, birth order and sibling sex composition add layers of complexity to the delivery and receipt of parental messages.

Birth Order

Research suggests that firstborn children benefit from increased access to parental time, energy, and engagement when compared to later-born children (Jacobs and Moss 1976; Pfouts 1980; Powell and Steelman 1990; Powell and Steelman 1993; Smith 1971). This increased access and attention may afford firstborn children greater opportunities to learn their parents' attitudes, leading to greater accuracy than their later-born peers.

In addition, later-born children may be less accurate than their firstborn and only-child peers because their perceptions are filtered through observations of older siblings. Research on value socialization has repeatedly demonstrated that children's perceptions of their parents' attitudes are correlated much more closely with the children's actual attitudes than with parents' actual attitudes (Acock and Bengston 1980; Cashmore and Goodnow 1985; Furstenberg 1967, 1971; Whitbeck and Gecas 1988). For example, in a study of intergenerational similarity in political and religious values, Acock and Bengston (1980) find that children attribute values to their parents in reference to their own values; that is, children practice "misattributed polarization," consistently perceiving their parents' values to be more traditional or conservative than their own, and more traditional or conservative than the parents really are. Likewise, Thornton and Camburn (1987) attribute children's misperceptions of their parents' attitudes toward sex to the children's tendency to base their perceptions on their own attitudes. However, in contrast to "misattributed polarization," the authors assert that children perceive their parents attitudes toward sex to be *closer* to their own attitudes toward sex, perhaps to help justify their own attitudes and behaviors. This same process may contribute to lower accuracy among later-born children compared to their firstborn peers; in addition to their own

attitudes, younger siblings have the opportunity to misattribute parents' attitudes to their *siblings*' attitudes and behaviors as well.

With these mechanisms in mind, I hypothesize that firstborn children will more accurately perceive their mothers' attitudes toward sex than later-born children. Logically, only-children should benefit from the same increased parental attention paid to firstborn children. Thus, I would expect no difference in accuracy between firstborn and only-children, and I hypothesize that only-children will more accurately perceive their mothers' attitudes toward sex than their later-born peers.

Hypothesis 4: Firstborn and only-children will more accurately perceive their mothers' attitudes toward sex than later-born children.

Sex Composition

While sociological research into the importance of sibling sex composition for children's outcomes was introduced in the late 1950s and has enjoyed increased attention in the past decade, this work has traditionally and continually maintained a primary focus on parental inputs toward educational attainment as the outcome of interest, and relatively few studies have deviated from this focus. Thus, empirical research into sibling sex-composition effects on children's accuracy in perceiving parental attitudes is fairly limited, and centers around the intergenerational transmission of educational achievement goals and aspirations.

The most common rationale for expecting sibling sex composition to affect children's accuracy in perceiving their parents' attitudes rests on the idea of positional differentiation among the sibling group; i.e., standing out from the crowd. This theory suggests that a child in a family in which the other siblings are of the opposite sex holds a

more differentiated position in the family, which in turn would result in a more "special" relationship with the parents, ultimately resulting in more accurate perceptions of parental orientations (Smith 1984; Schvaneveldt & Ihinger 1979). Under this model, one would expect that only-children, girls with only brothers, and boys with only sisters would more accurately perceive their parents attitudes than would girls with only sisters, boys with only brothers, or any child with both brothers and sisters. This theory was partially supported by Smith (1984), who found that teen girls in families where the majority of children were boys were significantly more accurate at perceiving their parents' educational goals than were girls in more gender-mixed, or girl-only households. However, a similar effect was not found for boys in majority-girl households.

The dearth of research into sibling sex composition effects on accuracy permits alternative models of influence. For example, one might hypothesize that children in all-girl or all-boy households would be more accurate in perceiving their parents attitudes than children in mixed-sex households, because same-sex siblings report warmer, closer relationships than mix-sex siblings (Buhrmester and Furman 1990), and would therefore be more likely to compare notes on their perceptions, or to take cues about parents' attitudes from each other and arrive at a more accurate conclusion by triangulation.

> Hypothesis 5: Children with only opposite-sex siblings and only-children will more accurately perceive their mothers' attitudes toward sex than will children with only same-sex siblings, and children with both same- and opposite-sex siblings.

Controls

Each of the hypothesized relationships is expected to occur net of a relatively large set of controls for mothers' and children's characteristics. I control for mother's actual attitude toward sex because the strength of mothers' disapproval of sex is likely to be related both to communication behaviors (Miller, Benson, and Galbraith 2001) and to accuracy (Cashmore and Goodnow 1985). Likewise, characteristics of the mother, including marital status, religiosity, income, and level of education are included in the models because of their potential to influence both communication behaviors and accuracy (Hoff et al. 2002; Knafo 2003; Okagaki et al. 1999; Smith 1984). Selected characteristics of the child, including the child's assessment of mother-child relationship quality, romantic relationship status, sexual behavior, age, and gender are also controlled. Mother-child relationship quality is included in the model because it is theorized to influence the degree to which parental messages are given, understood, and attended to (Cashmore and Goodnow 1985; Knafo and Schwartz 2003). Children's romantic relationship status and sexual behavior (whether child has had sex) are controlled because research suggests that parent/child sex-related communication increases when parents suspect or find out that their child has had sex (Miller et al. 2001; Inazu and Fox 1980; Thomson 1982). In addition, children who believe their parents are aware of their relationship status and/or sexual activity may be more likely to underestimate their parents' disapproval of sex, especially if the parents appear to approve of the relationship itself.

METHODS

Data

Data used in these analyses come from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a 14-year, four-wave longitudinal study of adolescents, incorporating a systematic school-based sampling design so that the sample is representative of U.S. adolescents in grades 7-12 in 1994-95. Multiple data collection components have resulted in multiple sources of information about each respondent, including their fellow students, school administrators, parents, siblings, friends, and romantic partners. 20,745 adolescents completed the Wave 1 at-home interview in 1995, which contained measures of family composition and dynamics, sexual behavior, romantic partnerships, and health status, among many others. A parent (in most cases the resident mother) completed a separate questionnaire at Wave 1, which included measures of her relationship status, household income, education and employment, and parent-adolescent communication and interaction. The analysis sample is limited to 8,194 mother-child pairs wherein the child is unmarried and between the ages of 13 and 17 at Wave 1, and for whom the parent questionnaire was completed by the child's resident biological, step-, adoptive, or foster mother. Restricting the sample to parent-child pairs where the parent interview was completed by a resident mother ensures a match in the person of reference between data provided by the parent and data provided by the child about that parent.

The advantages of Add Health for my analyses include the large, nationally representative sample, matching measures of parents' attitudes toward sex and teens' perceptions of those attitudes, and detailed measurement of parents' communication about sex and birth control. The primary disadvantages of the data are that most (though

not all) parent interviews were completed by a resident mother, limiting analyses to mother-child pairs, and that parents were not re-interviewed after Wave 1. Ideally, to fully study the effects of parental sex-communication behaviors on accuracy, it would be best to have data that include measures of sex communication, parental sex attitudes, and children's perceptions of those attitudes at different points in time, and from both parents. However, despite these limitations, Add Health remains the best available data source for these analyses. Other studies which feature detailed measurement of teen sexual behavior (i.e. the National Survey of Family Growth) lack a parent interview and/or are not nationally representative.

(Table 3.1 about here)

Measures

Measures of Accuracy of Perceptions

In Wave 1, mothers were asked to agree or disagree to the following statement: "If it was with someone who was special to (him/her) and whom (he/she) knew well such as a steady (girlfriend/boyfriend), you would not mind if [name] had sexual intercourse." Answers ranged on a five-point scale from "strongly agree" to "strongly disagree," and were coded into three categories reflecting lack of disapproval ("strongly agree," "agree," and "neither agree nor disagree"), disapproval ("disagree"), and strong disapproval ("strongly disagree"), with higher values reflecting greater disapproval of sex. Sixty-one percent of mothers in the analysis sample strongly disapproved of their child having sex with a special someone, compared to 22% who disapproved and 16% who did not disapprove. Children were asked this corresponding question about their mothers: "How would she feel about your having sexual intercourse with someone who was special to you and to whom you knew well—like a steady (girlfriend/boyfriend)?" Forty-nine

percent of children perceived that their mothers strongly disapproved of sex with a special someone, while nearly equal proportions reported their mothers as disapproving (25%) and not disapproving (26%).

To gauge the accuracy of children's perceptions of their mothers' feelings toward sex, a dichotomous measure was created which was coded "1" if the child's perception exactly matched his/her mother's attitude as measured above. Fifty percent of children accurately perceived their mothers' attitude toward sex with a special someone. Table 3.2 shows the crosstab of the proportion of children in each category of perception of mothers' attitude, by mothers' actual attitude. The shaded boxes represent children who accurately perceive their mothers' attitude. By far, the largest proportion of the sample (36%) falls into the "strongly disapproves" category for both the perception and actual attitude, reflecting strong parental opposition to teen sex. On the opposite end of the accuracy spectrum, just six percent of teens had mothers who actually did not disapprove of sex, but believed that their mothers strongly disapproved. Ten percent of teens perceived that their mothers did not disapprove of their having sex with a special someone, while their mothers actually strongly disapproved.

(Table 3.2 about here)

Measures of Mother's Communication

Mothers' orientation toward sex-related communication was measured by a series of five questions. Mothers were asked to agree or disagree with the following statements[6]: "You really don't know enough about sex and birth control to talk about

[6] The introduction for these statements read, "The next questions are about how often you discuss certain topics with {NAME}. How much do you agree or disagree with each of the following statements?"

them with (name);" "It would embarrass (name) to talk to you about sex and birth control;" "It would be difficult for you to explain things if you talked with (name) about sex and birth control;" "(Name) will get the information somewhere else, so you don't really need to talk to (him/her) about sex and birth control;" and, "Talking about birth control with (name) would only encourage (him/her) to have sex." Answer choices for all five questions ranged from "strongly agree" to "strongly disagree" on a five-point Likert scale and were coded so that higher values indicate a more positive orientation toward sex-related communication. Scores for all five questions were then averaged to form an index ranging from 1 to 5 (alpha=.80). The mean response to this index was 4.24, indicating mothers' relatively positive orientation toward sex-related communication.

Mothers' reports of talking about the negative implications of sex were measured with four questions: "How much have you and (name) talked about (his/her) having sexual intercourse and:" (A)"the negative or bad things that would happen if (he got someone/she got) pregnant;" (B) "the dangers of getting a sexually transmitted disease;" (C) "the negative or bad impact on (his/her) social life because (he/she) would lose the respect of others;" and (D) "the moral issues of not having sexual intercourse?" Answer choices ranged from "not at all" to "a great deal," with higher numbers reflecting greater frequency of talk about the negative consequences of sex. Responses to all four questions were averaged to form an index ranging from 1 to 4 (alpha=.86), with a mean of 2.92.

To measure explicit discussion of sex and birth control, mothers were asked, "How much have you talked to (name) about birth control?" and "How much have you

talked to (name) about sex?" Answer choices ranged from "not at all" (1) to "a great deal" (4). The mean value for talking about birth control was 2.69, compared with a mean of 3.00 for talking about sex.

Measures of Family Structure

Family structure is measured by questions in the household roster of the adolescent interview. Teens are asked to report the name, gender, age, and relationship to themselves for each household member. These responses are then coded into two sets of dichotomous measures for sibling composition and birth order. Sibling composition is measured by four dichotomous variables: Child has no siblings; Child has brothers and sisters; Child has only brothers; and Child has only sisters, each coded as "1" if the criterion is met, and "0" if not. Eighteen percent of children in the sample were only children (no siblings), while 25% had both brothers and sisters. Birth order is also measured with four dichotomous variables: Child has no siblings; Child has older and younger siblings; Child has only older siblings; Child has only younger siblings. Each is coded as "1" if true, and "0" if not true. Forty percent of sample children were the oldest in their family (had only younger siblings), while 24% reported being the youngest child (had only older siblings). Sixteen percent had both older and younger siblings. The mean number of children in each household was 2.68.

Measures of Mother's Characteristics

All measures of mothers' characteristics were collected in the Wave 1 Parent interview. Mother's marital status was measured in the parent questionnaire and was coded dichotomously as currently married (1) or currently unmarried (0). Seventy-four

percent of mothers were currently married at Wave 1. Mother's religiosity was measured by the question, "How important is religion to you?" Answers fall on a four-point scale ranging from "not important at all" to "very important," and averaged 3.42, indicating a fairly high level of religiosity. Family income was measured by the following question, "About how much total income, before taxes, did your family receive in 1994? Include your own income, the income of everyone else in your household, and income from welfare benefits, dividends, and all other sources." Answers were recorded in thousands of dollars, with $999 representing incomes of $999,000 and above. Mean family income was $46,300. Mother's level of education is measured by the question, "How far did you go in school?" Responses were coded into five categories: less than high school (1); high school graduate (2); some college, but less than 4-year degree (3); 4-year college degree (4); and graduate or professional training (5). The largest proportion of mothers had some college but less than a four-year degree (33%). Sixteen percent did not graduate from high school.

Measures of Child's Characteristics

Children's characteristics were taken from the Wave 1 In-Home interview. Mother-child relationship quality is measured from the child's point of view. Teens are asked to agree or disagree with the statement, "Overall, you are satisfied with your relationship with your mother." Answers range from "strongly agree (5)" to "strongly disagree (1)" and are coded so that higher values indicate greater relationship satisfaction. Children's mean relationship quality score was 4.34, indicating a relatively high level of mother-child relationship satisfaction. Age is coded dichotomously so that younger teens (ages 13-15) are coded as "1," and older teens (ages 16-17) are coded as "0." Sixty-four

percent of teens were in the younger age group. Gender is also coded dichotomously, with males coded as “0” and females coded as "1." To measure children's romantic relationship status, children were asked, "In the last 18 months—since {MONTH, YEAR}—have you had a special romantic relationship with any one?" Children who report a romantic relationship in the past 18 months are coded as "1" and all others are coded as "0." This measure is not ideal in that it does not indicate whether the child is in a relationship at the time of interview. However, it does give some indication of whether measures of attitudes about sex with a special someone (both the mother's actual attitude, and the child's perception of her attitude) are based on a hypothetical or actual romantic relationship. Fifty-one percent of teens had had at least one special romantic relationship in the 18 months before interview.

Analytic Strategy

The analysis proceeds in two steps. First, I estimate the relationship between mothers’ communication and the accuracy of children’s perceptions of their mothers’ attitudes toward sex in 8,194 mother-child pairs. Second, I model the relationship between family structure—operationalized by sibling composition and birth order—and accuracy of children’s perceptions, with and without controls for mothers’ sex-related communication. Logistic regression is used in all multivariate models, and all descriptive and multivariate models are adjusted to incorporate sample weights using the svy commands in Stata Version 10, consistent with Chantala and Tabor (1999).

(Table 3.3 about here)

RESULTS

Communication about Sex and the Accuracy of Children's Perceptions

Table 3.3 shows logistic regression estimates of the relationship between mothers' communication about sex and the accuracy of children's perceptions of their mothers' attitudes toward sex. Model 1 is a base model including controls for the mother's actual attitude toward sex; characteristics of the mother, including marital status, religiosity, income, and level of education; and selected characteristics of the child, including mother-child relationship quality, age, gender, romantic relationship status, and sexual behavior. Model 2 adds mother's communication attitudes and behaviors to the base model. Accuracy is coded dichotomously, as described above.

Mother's Attitude

Model 1 shows a strong positive relationship between mothers' disapproval of sex and accuracy, indicating that children are more likely to accurately perceive their mothers' attitudes when mothers' feelings about the subject are highly negative. For example, a child whose mother strongly disapproves of sex has 46% higher odds of accurately perceiving his/her mother's attitude than a child whose mother merely disapproves. However, when the same relationship is tested on a gender-stratified sample (shown in Appendix A, Table 6A), it becomes clear that the relationship between mothers' disapproval of sex and children's accuracy of perceptions depends greatly on whether the child is male or female; both daughters and sons whose mothers disapprove of sex have higher odds of accuracy, but the relationship is much stronger for daughters. For daughters, each one-unit difference in mother's disapproval of sex is associated with 107% higher odds of accuracy—that is, the daughter of a mother who strongly

disapproves of sex is more than twice as likely to accurately perceive her mother's attitude than a girl whose mother merely disapproves. For boys, on the other hand, the relationship is not quite so strong. Boys whose mothers strongly disapprove of sex have 27% higher odds of accurately perceiving their mothers' feelings than do boys whose mothers disapprove (but not strongly) of sex. A model of the interaction between mother's attitude and child's gender on the pooled sample (Appendix A, Table 3.6B) shows the difference is statistically significant.

Mother's Characteristics

Mother's marital status, religiosity, and level of education are all positively related to children's accuracy, independent of the mother's actual attitude and the child's own characteristics. Children whose mothers were married at Wave 1 have 12% higher odds of accurately perceiving their mothers' attitudes than do children whose mothers were not married, though, as shown in Model 2, this effect is no longer significant when mother's communication is included in the model. Each one-unit increase in mother's religiosity (on a four-point scale) is associated with 10% higher odds of children's accuracy, so that a child whose mother reported that religion was "very important" has 21% higher odds of accurately perceiving his/her mother's attitude than a child whose mother reported that religion was only "somewhat important" (a two-point difference in religiosity). Model 1 also shows that mother's level of education is positively associated with accuracy, so that children whose mothers have more education are more likely to accurately perceive their mothers' attitudes toward sex than children of mothers with less education. The difference is relatively small, however.

Child's Characteristics

Among children's characteristics, mother-child relationship quality and gender are positively associated with accuracy. Adolescents who report greater satisfaction with their relationships with their mothers are more likely to accurately perceive their mothers' attitudes toward sex than are children who report less-satisfying relationships. In addition, girls have 44% higher odds of accurately perceiving their mothers' attitudes than do boys. Romantic relationship experience and sexual experience are both associated with a lower likelihood of accurate perceptions. Teens who reported a special romantic relationship in the 18 months prior to interview had 18% lower odds of accuracy than teens who had not had a romantic relationship. Likewise, those who reported having sexual intercourse before the Wave 1 interview had 23% lower odds of accurately perceiving their mothers' attitudes toward sex.

Mother's Communication

Model 2 adds mother's communication attitudes and behaviors to the base model presented in Model 1. The results show mothers' attitudes toward sex-related communication are statistically significantly related to the accuracy of children's perceptions. A one-unit increase in mother's positive orientation toward sex-related communication (on a scale of one to five) is associated with 12% higher odds of a child's accuracy. Surprisingly, mothers' reports of their sex communication behaviors were only marginally related to children's accurate perceptions; neither mothers' talk about the negative consequences of sex, nor overall frequency of talk about sex showed a statistically significant relationship to accuracy. The frequency of mothers' talk about birth control was negatively associated with accuracy. This is in the opposite direction

than was hypothesized, though consistent with research by Dittus and Jaccard (2000), who found that children who believed their mothers approved of the use of birth control were more likely to underestimate their mothers' disapproval of sex than were children who believed their mothers disapproved of birth control.

(Table 3.4 about here)

Birth Order, Sibling Composition, and the Accuracy of Children's Perceptions

Table 3.4 shows logistic regression estimates of the relationship between birth order and children's perceptions of their mothers' attitude toward sex with a special someone. Models one through four include dummies for birth order, as well as controls for mother's and child's characteristics. Models five through eight add effects of mother's communication attitudes and behaviors. Models one through four show that compared with firstborn children, youngest and only children are less accurate at perceiving their mother's attitude toward sex. Youngest children were only 87% as likely as firstborn children to accurately perceive their mother's attitudes toward sex; and only children were 85% as likely. The youngest- and only-child groups did not significantly differ in accuracy from each other, and children with both older and younger siblings were not significantly more or less accurate than any other group. While the hypothesized difference between firstborn and youngest children was supported, the difference between only children and firstborn children was not expected. This suggests that increased access to and attention from parents is not the mechanism through which firstborn children achieve more accurate perceptions of their parents' attitudes than their later-born peers. If that were the case, only-children might be expected to be even more accurate than firstborns. Instead, these results suggest that firstborn children benefit (in

terms of accuracy) from the presence of younger siblings. This is consistent with research into the influence of birth order on intellectual ability, which has noted a similar congruence between only-children and last-born children, leading to the idea of the *teaching function*—the idea that having a younger sibling allows the older child to assume the role of tutor, which may benefit them more than the younger sibling **(**Zajonc and Markus 1975; Steelman et al 2002).

Models five through eight indicate that the relationship between birth order and accuracy is not a function of mother's communication attitudes and behaviors. When these attitudes and behaviors are included in the models, the effects of birth order remain unchanged. That is, birth order does not appear to influence accuracy by means of birth order-related differences in mother's communication behaviors.

(Table 3.5 about here)

Table 3.5 shows the logistic regression estimates of the relationship between sibling sex composition and accuracy of children's perceptions of their mothers' attitude toward sex with a special someone, with and without controls for mother's communication attitudes and behaviors. Sibling sex composition is coded into four dichotomous categories: child has no siblings; child has brothers and sisters; child has only brothers; and child has only sisters. Because having only sisters or only brothers is differentially meaningful for boys and girls, models are stratified by gender[7]. Models 1a through 2b show the relationship between sibling sex composition and accuracy for female children. The results indicate that sibling sex composition is not related to accuracy for girls, while mother's attitude toward sex, positive orientation toward sex

[7] Analysis of the gender-sibling sex composition interaction on the full sample (shown in Appendix A, Table 3.7) indicates that the gender difference is statistically significant.

communication, and frequency of talk about birth control were all significantly related to accuracy.

Models 5a through 6b show the relationship between sibling sex composition and accuracy for male children[8]. Model 5a indicates that boys in all-boy households (those with only brothers), and boys with at least one sister but no brothers (those with only sisters) had higher odds of accurately perceiving their mothers' attitudes toward sex than their only-child peers. For each one-unit increase in mother's disapproval toward sex, boys with only brothers had 36% higher odds of accuracy, and boys with only sisters had 29% higher odds of accuracy than did only-children. Model 5b indicates that these relationships hold even when mothers' sex communication attitudes and behaviors are controlled. Model 6a indicates that compared to boys with at least one brother and one sister, boys from all-boy households had higher odds of accuracy, an 18% difference. However, this relationship appears to be explained by mothers' sex communication attitudes and behaviors (model 6b). This result indicates that mothers' sex communication attitudes and behaviors are somehow different for all-boy households than they are for households with at least two boys and one or more girls.

Taken together, the models in Table 3.5 indicate no support for the positional differentiation hypothesis among girls or boys. There were no significant differences in accuracy between sibling composition groups for girls. Though unexpected, this result is not inexplicable; for example, Smith (1984) found that parent's sex and child's sex interact with family structure to influence accuracy of perceptions of parents' educational goals, so that same-sex parent-child pairs resulted in greater accuracy among children

[8] Additional models were run with each sex composition group as the reference, but no group differences were found in the models not presented.

among all family types. Thus, it's possible that different effects of sibling sex composition might have been observed if mother-daughter, mother-son, father-daughter, and father-son dyads could have been observed. Unfortunately, the survey did not collect attitudes from enough fathers to facilitate such an analysis. Among the boys, some differences were observed among sex composition groups, though not those hypothesized; namely, boys from all-boy families, and boys with only sisters were both more accurate than only-children, while boys with both brothers and sisters were not different than only children.

DISCUSSION

This paper sought to expand the literature on children's perceptions of their parents' attitudes toward sex by addressing two research questions: (1) how are mothers' sex-themed communication behaviors related to the accuracy of teens' perceptions of their mothers' attitudes toward sex? And (2): how does family structure influence the accuracy of children's perceptions?

My results indicate that while children more accurately perceived their mothers' attitudes toward sex when the mothers' held positive attitudes toward talking about sex, mothers' reports of actual sex-related communications had almost no relationship to accuracy. One likely explanation for this finding is that parents' reports of sex-related communication behaviors often don't reflect teens' reports of the same behaviors—that is, parents' and teens often don't agree as to what constitutes a conversation about sex (Fisher 2004). In illustration, Jaccard and colleagues (1998) reported a very low correlation (.18) between mothers' and teens' reports of sex-related communication. This

indicates that while mothers may believe they are communicating messages about sex, at least for some teens the messages remain unheard. Another possible reason for the lack of relationship may lie in the measurement of communication behavior. While mothers' reports of talking about the negative implications of sex were measured by a four-question index, the measures of frequency of talk about sex and birth control were single general questions, without reference to time or content. This generality in measurement may have obscured existing relationships between more specific types or timings of sex-related communication and accuracy.

In investigating the influence of family structure on accuracy, I found that, holding mother's sex communication attitudes and behaviors constant, lastborn and only children are less accurate at perceiving their mother's attitude toward sex than are firstborn children. While the difference between firstborn and youngest children was expected, the difference between only children and firstborn children was not. This suggests that increased access to and attention from parents is not the mechanism through which firstborn children achieve more accurate perceptions of their parents' attitudes than their later-born peers. If that were the case, only-children might be expected to be even more accurate than firstborns. Instead, these results suggest that firstborn children benefit (in terms of accuracy) from the presence of younger siblings. This is consistent with research into the influence of birth order on intellectual ability, which has noted a similar congruence between only-children and last-born children, leading to the idea of the *teaching function*—the idea that having a younger sibling allows the older child to assume the role of tutor, which may benefit them more than the younger sibling **(**Zajonc and Markus 1975; Steelman et al 2002).

Though birth order appears to play a significant role in children's accuracy, sibling sex composition showed much more mixed results. For girls, sibling sex composition was not related to accuracy. For boys, some group differences emerged, but no clear theoretical pattern was supported. One likely explanation for this result is that the analysis failed to account for interactions among dimensions of family structure, therefore obscuring the meaning of the results. For example, given the relationship between birth order and accuracy, it's likely that birth order interacts with sibling sex composition in some way, so that being an firstborn boy with only sisters might have profoundly different implications for accuracy as being a lastborn or middle-born boy with those same sisters. Future studies would benefit from the examination of multiple combinations of birth order and sex composition, as well as the additional complexity of birth spacing, which might shed further light on the dimensions of family structure most salient for the accurate perception of parental attitudes. Data containing both mothers' and fathers' attitudes and children's perceptions of those attitudes would likely also further our understanding of the role of family structure in children's accurate perceptions, and thus better understand the key mechanism through which parental attitudes are passed to the next generation.

Limitations

Most parents of adolescents strongly disapprove of sex for their child, and most teens perceive that their parents strongly disapprove of sex. Understandably, sex is a sensitive topic for most parents of adolescents. Unfortunately, this results in very little variation in measures of parental attitudes and perceptions. Future research on the role of accuracy as a moderating variable in the relationship between perceptions and behaviors

will benefit from the study of less sensitive topics, which would permit a more complex conceptualization of accuracy.

In addition, my analysis of the correlates of accuracy is limited by its cross-sectional design. This is not so much of an issue for family structure, because birth order and sibling sex composition are determined at birth. However, though mothers' attitudes toward sex-themed communication and communication behaviors are logically prior to accuracy of children's perceptions, I cannot rule out reverse causation. An ideal study design would measure parental behavior and attitudes in multiple waves, so that communication could be modeled temporally prior to accuracy.

Time and time again, social research has highlighted the importance of children's perceptions of their parents' attitudes for the intergenerational transmission of those attitudes. This study makes an important contribution to this body of work, by elaborating some of the pathways through which children come to accurately perceive their parents' attitudes toward sex. For researchers and public health professionals concerned with the risks of sexual activity at young ages, and for social psychologists hoping to tease apart the complex relationships between parents' preferences, parenting styles, and behaviors, and children's outcomes, this analysis makes one more step toward understanding the process through which parents' attitudes ultimately influence the attitudes and behaviors of the next generation.

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Table 3.1. Means and Standard Errors for Measures used in Analyses

	(Weighted)			
	Mean	Std. Err.	Min	Max
Accuracy	0.50	0.010	0	1
Mother's attitude toward sex with special someone	2.46	0.018	1	3
Mother is married at Wave 1	0.74	0.014	0	1
Importance of religion to mother	3.42	0.021	1	4
1994 income (in thousands of dollars)	46.30	1.932	0	999
Mother's education	2.76	0.048	1	5
Positive orientation toward sex communication	4.24	0.019	1	5
Frequency of talk about negative consequences of sex	2.92	0.027	1	4
Frequency of talk about birth control	2.69	0.034	1	4
Frequency of talk about sex	3.00	0.025	1	4
Mother/child relationship quality	4.34	0.017	1	5
Child is aged 13-15	0.65	0.027	0	1
Child is female	0.51	0.008	0	1
Child is in romantic relationship	0.52	0.013	0	1
Child had sex by Wave 1	0.30	0.016	0	1
Child has only sisters	0.26	0.008	0	1
Child has only brothers	0.30	0.007	0	1
Child has brothers and sisters	0.25	0.009	0	1
Child has no siblings	0.18	0.009	0	1
Child has younger siblings only	0.40	0.009	0	1
Child has older siblings only	0.24	0.009	0	1
Child has younger and older siblings	0.16	0.008	0	1
Total number of children in family	2.68	0.032	0	14

N=8194

Table 3.2. Children's Perceptions of their Mother's Attitudes, by Mother's Actual Attitude

Child's Perception of Mother's Attitude	Mother's Actual Attitude			
	Does not disapprove	Disapproves	Strongly Disapproves	Total
Perceives mother does not disapprove	0.07	0.08	0.10	0.25
Perceives mother disapproves	0.04	0.07	0.15	0.26
Perceives mother strongly disapproves	0.06	0.08	0.36	0.49
Total	0.16	0.22	0.61	

Notes:
Proportions are adjusted for sampling design.
Shaded cells indicate perceptions coded as "accurate."

Table 3.3. Logistic Regression Estimates of the Relationship between Mothers' Communication and Accuracy of Children's Perception of their Mothers' Attitude toward Sex with a Special Someone

	Model 1	Model 2
Mother's Actual Attitude toward Sex		
Disapproval of sex with special someone	1.46***	1.44***
	(5.54)	(5.28)
Mother's Communication Attitudes and Behaviors		
Positive orientation toward sex-related communication		1.12*
		(1.83)
Frequency of talk about negative consequences of sex		1.04
		(.67)
Frequency of talk about birth control		.92+
		(-1.55)
Frequency of talk about sex		0.94
		(-1.12)
Controls		
Mother's Characteristics		
Mother is married at Wave 1[a]	1.12*	1.09
	(1.65)	(1.14)
Importance of religion to mother	1.10**	1.10**
	(2.64)	(2.49)
Family income in 1994	0.99	1.00
	(-1.06)	(-1.14)
Mother's level of education	1.07**	1.06**
	(3.04)	(2.35)
Child's Characteristics		
Relationship quality with mother	1.18***	1.18***
	(4.33)	(4.39)
Child is under 16 years old[b]	1.01	0.99
	(.17)	(-0.14)
Child is female	1.44***	1.45***
	(6.39)	(6.25)
Child is in a romantic relationship	.82**	.83**
	(-2.83)	(-2.73)
Child has had sex by Wave 1	.77***	.79***
	(-3.54)	(-3.10)
N	8194	8112
Prob. > F	0.0000	0.0000

Notes: T-ratios in parentheses.

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Reference group is unmarried

[b] Reference group is 16-17 years old at Wave 1

Table 3.4. Logistic Regression Estimates of the Relationship between Birth Order and Accuracy of Children's Perception of their Mothers' Attitude toward Sex with a Special Someone

Mother's Actual Attitude toward Sex	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Mother's attitude toward sex with special someone	1.46***	1.46***	1.46***	1.46***	1.44***	1.44***	1.44***	1.44***
	(5.52)	(5.52)	(5.52)	(5.52)	(5.26)	(5.27)	(5.26)	(5.26)
Birth Order								
Child has younger siblings only	ref	1.15*	1.06	1.18*	ref	1.15*	1.07	1.19*
		(2.00)	(.67)	(2.10)		(1.95)	(.81)	(2.14)
Child has older siblings only	.87*	ref	.92	1.03	.88*	ref	.94	1.04
	(-1.89)		(-1.00)	(.32)	(-1.85)		(-.83)	(.39)
Child has younger and older siblings	.96	1.10	ref	1.13	.94	1.08	ref	1.12
	(-.52)	(1.14)		(1.25)	(-.66)	(.96)		(1.15)
Child has no siblings	.85*	.98	.90	ref	.85*	.97	.91	ref
	(-1.98)	(-.24)	(-1.12)		(-2.03)	(-.31)	(-1.03)	
Mother's Communication Attitudes and Behaviors								
Positive orientation toward sex-related communication					1.12*	1.12*	1.12*	1.12*
					(1.81)	(1.80)	(1.80)	(1.81)
Frequency of talk about negative consequences of sex					1.04	1.04	1.04	1.04
					(.75)	(.76)	(.76)	(.76)
Frequency of talk about birth control					.92+	.92+	.92+	.92+
					(-1.58)	(-1.58)	(-1.58)	(-1.58)
Frequency of talk about sex					.94	.94	.94	.94
					(-1.17)	(-1.17)	(-1.17)	(-1.16)
Controls								
Mother's Characteristics								
Mother is married at Wave 1[a]	1.11+	1.11+	1.11+	1.11+	1.07	1.07	1.07	1.07
	(1.45)	(1.45)	(1.45)	(1.44)	(.96)	(.95)	(.96)	(.95)
Importance of religion to mother	1.10**	1.10**	1.10**	1.10**	1.10**	1.10**	1.10**	1.10**
	(2.64)	(2.64)	(2.65)	(2.64)	(2.49)	(2.49)	(2.50)	(2.49)
1994 income (in thousands of dollars)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(-.94)	(-.94)	(-.94)	(-.94)	(-1.02)	(-1.02)	(-1.02)	(-1.02)
Mother's education	1.08**	1.08**	1.08**	1.08**	1.06**	1.06**	1.06**	1.06**
	(3.05)	(3.05)	(3.05)	(3.06)	(2.39)	(2.40)	(2.39)	(2.40)
Child's Characteristics								
Relationship quality with mother	1.18***	1.18***	1.18***	1.18***	1.19***	1.19***	1.19***	1.19***
	(4.35)	(4.36)	(4.35)	(4.36)	(4.41)	(4.42)	(4.41)	(4.42)
Child is under 16 years old[b]	1.02	1.02	1.02	1.01	.99	.99	.99	.99
	(.22)	(.21)	(.22)	(.21)	(-.10)	(-.10)	(-.10)	(-.11)
Child is female	1.44***	1.44***	1.44***	1.44***	1.46***	1.46***	1.46***	1.46***
	(6.40)	(6.40)	(6.40)	(6.40)	(6.25)	(6.25)	(6.25)	(6.24)
Child is in a romantic relationship	0.82**	0.82**	0.82**	0.82**	0.83**	0.83**	0.83**	0.83**
	(-2.83)	(-2.83)	(-2.83)	(-2.83)	(-2.73)	(-2.73)	(-2.73)	(-2.72)
Child has had sex by Wave 1	.77***	.77***	.77***	.77***	.80**	.80**	.80**	.80**
	(-3.50)	(-3.51)	(-3.51)	(-3.51)	(-3.05)	(-3.06)	(-3.06)	(-3.06)
N	8194	8194	8194	8194	8112	8112	8112	8112
Prob. > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Notes: T-ratios in parentheses.

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Reference group is unmarried

[b] Reference group is 16-17 years old at Wave 1

Table 3.5. Logistic Regression Estimates of the Relationship between Sibling Sex Composition and Accuracy of Children's Perception of their Mothers' Attitude toward Sex with a Special Someone

	Females				Males			
Mother's Actual Attitude toward Sex	Model 1a	Model 1b	Model 2a	Model 2b	Model 5a	Model 5b	Model 6a	Model 6b
Mother's attitude toward sex with special someone	1.93***	1.89***	1.93***	1.89***	1.12	1.12	1.12	1.12
	(8.35)	(7.78)	(8.35)	(7.78)	(1.27)	(1.26)	(1.27)	(1.26)
Sibling Sex Composition								
Child has no siblings	ref	ref	1.08	1.09	ref	ref	.86	.85
			(.58)	(.65)			(-1.15)	(-1.26)
Child has brothers and sisters	.92	.92	ref	ref	1.16	1.17	ref	ref
	(-.58)	(-.65)			(1.15)	(1.26)		
Child has only brothers	1.06	1.04	1.14	1.13	1.36**	1.37**	1.18+	1.17
	(.44)	(.30)	(1.18)	(1.13)	(2.68)	(2.75)	(1.32)	(1.27)
Child has only sisters	.95	.95	1.03	1.03	1.29*	1.28*	1.11	1.10
	(-.39)	(-.42)	(.23)	(.27)	(2.13)	(2.11)	(.89)	(.77)
Mother's Communication Attitudes and Behaviors								
Positive orientation toward sex-related communication		1.22*		1.22*		1.05		1.05
		(2.35)		(2.35)		(.63)		(.63)
Frequency of talk about negative consequences of sex		1.06		1.06		1.03		1.03
		(.79)		(.79)		(.37)		(.37)
Frequency of talk about birth control		.87*		.87*		.99		.99
		(-2.1)		(-2.1)		(-.13)		(-.13)
Frequency of talk about sex		.98		.98		.90+		.90+
		(-.32)		(-.32)		(-1.30)		(-1.30)
Controls								
Mother's Characteristics								
Mother is married at Wave 1[a]	1.12	1.08	1.12	1.08	1.14+	1.09	1.14+	1.09
	(1.18)	(.83)	(1.18)	(.83)	(1.31)	(.90)	(1.31)	(.90)
Importance of religion to mother	1.08+	1.08+	1.08+	1.08+	1.14**	1.13*	1.14**	1.13*
	(1.52)	(1.52)	(1.52)	(1.52)	(2.46)	(2.32)	(2.46)	(2.32)
1994 income (in thousands of dollars)	.99***	.99***	.99***	.99***	1.00	1.00	1.00	1.00
	(-3.26)	(-3.37)	(-3.26)	(-3.37)	(1.03)	(1.19)	(1.03)	(1.19)
Mother's education	1.10**	1.07*	1.10**	1.07*	1.06+	1.05+	1.06+	1.05+
	(2.62)	(1.88)	(2.62)	(1.88)	(1.53)	(1.35)	(1.53)	(1.35)
Child's Characteristics								
Mother/child relationship quality	1.17***	1.17***	1.17***	1.17***	1.21**	1.22**	1.21**	1.22**
	(3.57)	(3.56)	(3.57)	(3.56)	(3.06)	(3.05)	(3.06)	(3.05)
Child is aged 13-15[b]	1.00	.98	1.00	.98	1.02	.99	1.02	.99
	(.02)	(-.18)	(.02)	(-.18)	(.22)	(-.06)	(.22)	(-.06)
Child is in romantic relationship	.84*	.84*	.84*	.84*	.83*	.84*	.83*	.84*
	(-1.95)	(-1.92)	(-1.95)	(-1.92)	(-1.93)	(-1.78)	(-1.93)	(-1.78)
Child had sex by Wave 1	.71**	.75*	.71**	.75*	.82*	.82+	.82*	.82+
	(-2.89)	(-2.27)	(-2.89)	(-2.27)	(-1.72)	(-1.61)	(-1.72)	(-1.61)
N	4231	4189	4231	4189	3963	3923	3963	3923
Prob. > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Notes: T-ratios in parentheses.

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Reference group is unmarried

[b] Reference group is 16-17 years old at Wave 1

APPENDIX A

Table 3.6A. Logistic Regression Estimates of the Relationship between Mothers' Attitude toward Sex with a Special Someone, and Accuracy of Children's Perception of their Mothers' Attitude , by Child's Sex

	Female	Male
Mother's attitude toward sex with special someone	2.07***	1.27**
	(9.83)	(3.06)
N	5087	4679
Prob. > F	0.0000	0.0000

Notes: T-ratios in parentheses.

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

Table 3.6B. Logistic Regression Estimates of Gender-Mother's Attitude Interaction on Odds of Accurate Perception (Direction and Statistical Signifance Only)

Mother's Actual Attitude toward Sex	Model 1
Mother's attitude toward sex with special someone	pos+
Child is female	neg***
Interaction of mother's attitude and female	pos***
Controls	
Mother is married at Wave 1[b]	pos+
Importance of religion to mother	pos**
1994 income (in thousands of dollars)	NS
Mother's education	pos***
Relationship quality with mother	pos***
Child is under 16 years old[b]	NS
Child is in a romantic relationship	neg**
Child has had sex by Wave 1	neg**

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Reference group is child has no siblings.

[b] Reference group is unmarried

[c] Reference group is 16-17 years old at Wave 1

Appendix B

Table 3.7. Logistic Regression Estimates of Gender-Sibling Sex Composition Interaction on Odds of Accurate Perception (Direction and Statistical Signifance Only)

Mother's Actual Attitude toward Sex	Model 1
Mother's attitude toward sex with special someone	pos***
Sibling Composition and Interactions	
Child is female	pos***
Child has brothers and sisters[a]	NS
Child has only brothers[a]	pos**
Child has only sisters[a]	pos*
Interaction of gender and brothers and sisters	NS
Interaction of gender and brothers only	neg+
Interaction of gender and sisters only	neg+
Controls	
Mother is married at Wave 1[b]	pos+
Importance of religion to mother	pos**
1994 income (in thousands of dollars)	NS
Mother's education	pos**
Relationship quality with mother	pos***
Child is under 16 years old[b]	NS
Child is in a romantic relationship	neg**
Child has had sex by Wave 1	neg***

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

[a] Reference group is child has no siblings.

[b] Reference group is unmarried

[c] Reference group is 16-17 years old at Wave 1

CHAPTER IV.

MATERNAL INFLUENCES ON MARITAL QUALITY

INTRODUCTION

Though the divorce rate declined steadily throughout the 1990s, around half of first marriages are still projected to end in divorce, and marital satisfaction in intact first marriages has been on the downswing for the past 30 years (Bumpass 1990; Rogers and Amato 1997; Bradbury et al. 2000). Cohabitation, which has steadily increased in prevalence since the 1960s (Casper and Cohen 2000; Bumpass and Lu 2000), also involves a great deal of instability, with 40% of cohabitors breaking up within five years of moving in (Bumpass and Lu 2000). These high rates of relationship dissolution and dissatisfaction have resulted in a vast amount of scholarly research on a wide array of topics related to marital quality over the past two decades, including interpersonal processes such as social support and violence (Acitelli and Antonucci 1994; Bodenmann 1997; Coyne and Smith 1994; Cordova et al. 1993); micro-contextual determinants such as the presence of children and life stressors (Belsky 1990; Waite and Lillard 1991; Quittnere et al. 1998; Umberson 1995; Menaghan 1991); and macro-contextual determinants, which include geographic mobility, joblessness, marriage markets, and racism (Massey and Sibuya 1995; South and Lloyd 1995; South and Crowder 1999; Bradbury et al. 2000). In this paper, I focus on a single micro-contextual determinant of marital quality: parental family attitudes.

Sociological and demographic research has demonstrated the influence of parents' experiences and attitudes on many different dimensions of children's family formation behavior, including union formation, dissolution, childbearing, and premarital sex. For example, Thornton (1991) reports that mothers who marry young or who were pregnant at the time of marriage have children with higher rates of union formation; and mothers' single parenthood increases the likelihood that daughters will have a teenage birth (McLanahan and Bumpass 1988). Parents' past income and education both have negative effects on children's rates of union formation (Thornton, Axinn, and Xie 2007). There is also evidence that mothers' religiosity has negative effects on children's cohabitation (Thornton, Axinn, and Hill 1992). In contrast, parental divorce increases children's odds of cohabitation, nonmarital childbearing, and early sexual activity (Cherlin et al. 1995).

Some of the most interesting intergenerational effects demonstrated in the family literature concern the effects of parents' *attitudes* on their children's family formation behaviors. For example, mothers' preferences for their children's family formation behaviors have significant effects on their children's childbearing; mothers who prefer early marriage, large families, low levels of education, and stay-at-home-motherhood for their children have children who enter parenthood earlier than their peers (Barber 2000). Also, mothers' attitudes toward cohabitation influence the type of unions their children form. Daughters whose mothers have positive attitudes toward cohabitation are more likely to cohabit, and those whose mothers disapprove of cohabitation are more likely to marry (Axinn and Thornton 1993). Further, mothers' tolerance of premarital sex increases cohabitation rates and decreases marriage rates (Thornton, Axinn, and Xie

2007). Mothers' preferences for high levels of schooling for their children delay marriage, and mothers' who prefer that their children marry early and produce many grandchildren have children who marry at increased rates (Thornton, Axinn, and Xie 2007).

In this paper I investigate the direct and indirect effects of mothers' family attitudes on their adult children's marital/cohabiting relationship quality. Most intergenerational research on marital quality (in which marital quality of the second generation is the dependent variable) has focused on the influences of parental marital quality, and/or parental divorce on children's marital quality. I will expand on this work by examining the influence of maternal attitudes toward sex roles, cohabitation, and premarital sex on children's relationship quality. I use data from an eight-wave, 31-year panel study of White mothers and children in the Detroit metropolitan area.

BACKGROUND AND HYPOTHESES

Parental Influences on Adult Children's Marital Quality

Although a life course perspective would suggest that childhood exposure to the attitudes, values, and relationship qualities of the parental family influences family attitudes and behaviors in adulthood (Elder 1977; 1994), research into parental influences on adult children's marital quality has been fairly limited. With few exceptions (for example, see Amato and Booth 1997), these studies have tended to focus on the influence of marital quality and marital experiences of the parents. For example, several studies find that adults who retrospectively report conflict in their parents' marriages report more conflict and less happiness in their own relationships (Booth, Brinkerhoff, and White 1984; Amato and Booth 1991; Booth and Edwards 1990). Likewise, both cross-sectional

and longitudinal studies have found positive associations between parental marital quality and adult children's marital quality (Rossi and Rossi 1990; Caspi and Elder 1988; Amato and Booth 1997). Several studies have noted the apparent lack of relationship between parental divorce and adult children's marital quality; for example, analysis of the Longitudinal Study of Generations showed that while parental divorce increased the likelihood of divorce in daughters, it was not related to daughters' or sons' marital quality (Du Feng et al. 1999). Likewise, Amato and Booth (2001) found that parental divorce did not mediate the relationship between parents' and children's marital discord. Using data from the National Survey of Families and Households, Webster and colleagues (1995) also found that parental divorce did not influence marital happiness, though it was significantly related to children's perceptions of their marital instability.

Parental Family Attitudes and Adult Children's Partner Relationship Quality

A single known study has assessed the relationship between parents' family attitudes and adult children's subsequent marital quality. In their 1997 book, Amato and Booth modeled the influence of parents' gender role attitudes on children's subsequent marital quality; they found no consistent relationship. However, parents' family attitudes have been found to influence other domains of children's family formation behaviors, including childbearing, choosing cohabitation over marriage (and vice versa), and union formation timing, as described above (Barber 2000; Axinn and Thornton 1993; Thornton, Axinn, and Xie 2007). The primary goal of this paper is to explore whether these attitudes also have the power to influence the quality of a relationship once it has been formed. I examine three types of family attitudes: attitudes toward sex roles, tolerance for cohabitation, and tolerance for premarital sex. Because my analysis includes both

married and cohabiting children, henceforth I use the term "partner relationship quality" rather than "marital quality."

Because of the dearth of research on the influence of *attitudes* on partner relationship quality, I base my hypotheses on prior research about specific attitudinal influences on children's family formation behaviors (but not relationship quality), as well as more general work about the role of family of origin as an influential social network for couples in relationships. Generally speaking, I expect parental attitudes that encourage marriage will be associated with higher partner relationship quality among children, whether they are married or cohabiting. Conversely, I expect that parental attitudes that discourage or delay marriage will be negatively related to partner relationship quality. Mothers whose attitudes reflect pro-marriage values may be more supportive of their children's relationships, or may help steer their children toward partners who constitute a 'good match.' In addition, pro-marriage mothers of cohabiting children may be extra motivated to see the relationship transition to marriage, rather than dissolve. Numerous studies have emphasized the role of family of origin as an important part of the current context of a relationship, and thus an active force on the quality and stability of that relationship (Vaillant 1978; Kelly and Conley 1987; Wamboldt and Reiss 1989; Larson and Holman 1994). Parents and in-laws can negatively influence the quality of an adult child's relationship by serving as a source of intra-couple conflict or stress (Rhyne 1981), or by encouraging partners' feelings of dissatisfaction with their relationship (Bryant and Conger 1999). Conversely, parents can also positively influence relationship quality by serving as a source of social and/or material support for couples, and nurturing or validating the relationship (praising the fit of the match, or for example)

(Julien et al. 1994; Milardo and Lewis 1985). In addition to real-time influences on relationships, several studies have found lasting effects of *premarital* parental support or opposition, long after a relationship has begun (Booth and Johnson 1988; Whyte 1990). In the next sections, I outline my specific hypotheses.

Sex Role Attitudes

Mothers with more egalitarian sex role attitudes might influence their children's partner relationship quality in at least two ways. First, maternal gender egalitarianism may increase children's partner relationship quality by increasing age at relationship formation. This is because mothers with more egalitarian sex role attitudes are more likely to encourage education and career establishment over early marriage for their children. This effect is likely to work both directly from the mothers' own attitudes, and indirectly, through influencing children's sex role attitudes. Children exposed to more gender egalitarian mothers are likely to place higher value on education and career establishment for women—for daughters, this means postponing marriage in favor of education and career; for sons, it means postponing marriage for the sake of a like-minded, and therefore more educated/career established partner (Barber et al. 2002; Cunningham et al. 2005). Indeed, research on the role of gender egalitarianism on family formation behaviors indicates that individuals with more egalitarian sex role attitudes enter marriage and parenthood later than their less egalitarian peers, when educational expectations are controlled (Barber and Axinn 1998; Cunningham et al. 2005). Mothers' sex role attitudes similarly affect their children's behavior, with children of more egalitarian mothers entering marriage later than those whose mothers hold less egalitarian sex role attitudes (Thornton, Axinn, and Xie 2007). Later age at marriage is associated

with higher marital relationship quality (Du Feng et al. 1999; Bumpass, Martin and Sweet 1991).

Second, these same maternal sex role attitudes could negatively influence children's partner relationship quality, through the children's own attitudes. Research has indicated that, for women at least, more egalitarian sex role attitudes are related to lower relationship satisfaction, because women who expect more equal partnerships tend to be disappointed by the level of sharing of household and childcare tasks they actually experience (Amato and Booth 1995; Amato and Booth 1997; Greenstein 1996; Lueptow et al. 1989). On the other hand, husbands with more egalitarian sex role attitudes tend to report higher relationship quality (Amato and Booth 1995).

Given the lack of empirical research in this area, reconciling these possibly opposing influences is difficult. However, because I control for age at relationship formation as well as child/partner education level, I hypothesize that any remaining effect of maternal attitudes will operate in the negative direction—that is, more egalitarian maternal sex role attitudes will be associated with lower partner relationship quality for children. This adheres to my general hypothesis that maternal attitudes which encourage marriage will result in higher relationship quality. Thus, I make the following hypothesis:

> Hypothesis 1: Adults whose mothers held more egalitarian sex role attitudes in 1980 will have lower partner relationship quality in 1993 than adults whose mothers held less egalitarian sex role attitudes.

Attitudes toward Cohabitation

No known research exists on the relationship between mothers' cohabitation attitudes and their children's partner relationship quality. However, empirical studies about the effects of maternal cohabitation attitudes on children's marriage and cohabitation *behavior* are quite clear: children whose mothers feel positively about cohabitation marry at lower rates than children whose mothers are less tolerant of cohabitation. This effect is independent of children's own attitudes toward cohabitation (Axinn and Thornton 1993; Thornton, Axinn and Xie 2007). Again adhering to my general hypothesis that maternal attitudes that encourage marriage will result in higher relationship quality, I make the following hypothesis:

> Hypothesis 2: Adults whose mothers held less tolerant attitudes toward cohabitation in 1980 will report higher partner relationship quality in 1993 than those whose mothers held more tolerant attitudes toward cohabitation.

One possible mechanism for this relationship is age at co-residence. Holding education constant, children whose mothers oppose cohabitation are likely to delay formation of a co-residential union longer than children whose mothers favor cohabitation, because the costs associated with marriage are significantly higher than moving in together unmarried. The relatively higher costs of a wedding make it more likely that children will delay marriage until after schooling is complete, thus raising the age at relationship formation (as measured by co-residence), which is associated with higher relationship quality. Any effect of mother's attitude toward cohabitation that remains after age at relationship formation is controlled could be attributed to social support behaviors. For

example, mothers who hold negative attitudes toward cohabitation may provide more material support to their children's relationships in an effort to speed marriage.

Attitudes toward Premarital Sex

Research into the behavioral influences of mothers' attitudes toward premarital sex find that maternal tolerance for premarital sex is associated with an increased rate of cohabitation, and decreased rate of marriage for children (Thornton, Axinn, and Xie 2007). If maternal attitudes that encourage marriage result in higher partner relationship quality for children, I would expect children of sex-intolerant mothers to have higher partner relationship quality than their peers. In other words:

> Hypothesis 3: Adults whose mothers held more tolerant attitudes toward premarital sex in 1980 will have lower partner relationship quality in 1993 than those whose mothers held less tolerant attitudes toward premarital sex.

Again, the most likely mechanism for this relationship is age at co-residence. Holding education constant, children of sex-intolerant mothers are likely to form co-residential unions later than their peers, because they are more likely to marry than cohabit due to the pressure against premarital sex. Marriage is less compatible with schooling than is cohabitation, and is thus delayed (Barber, Axinn and Thornton 2002).

Controls

Because age at relationship formation is hypothesized to be a key mechanism through which many maternal attitudes influence children's relationship quality, each relationship is modeled with and without controls for relationship duration (which serves as a proxy for age at relationship formation in this data, as described below), measured by

duration of co-residence. I include controls for the following characteristics of the mother: marital quality, mother/child relationship quality, average family financial resources, and marital stability. Mothers' marital quality and mother/child relationship quality are controlled because of their known relationship to children's partner relationship quality. I expect that both will be positively related to children's partner relationship quality (Rossi and Rossi 1990; Caspi and Elder 1988; Amato and Booth 1997; Flouri and Buchanan 2002; Overbeek et al. 2007). Average family financial resources are controlled because of their potential to influence mothers' family attitudes and children's partner relationship quality (Bumpass, Martin, and Sweet 1991; Goldscheider and Waite 1991; Conger et al. 1990; Amato and Booth 1997). I use family income from the focal children's infancy (1962) because previous research indicates that children's union formation is more strongly influenced by income in early childhood than by income in adolescence (Thornton, Axinn and Xie 2007). Mother's marital stability is controlled because research shows that parental marital disruption influences family attitudes (Thornton 1985; Amato and Booth 1991; Axinn and Thornton 1996; Cunningham and Thornton 2007) and children's perceptions of their own marital stability (Webster, Orbuch and House 1995).

I also include controls for characteristics of the focal child's relationship, including child/partner average education, whether the relationship is cohabitation or marriage, and the focal child's gender. I control for couples' average education to account for SES effects on marital quality, which may be passed from the previous generation. Higher education and income are associated with higher relationship quality in multiple studies (Larson and Holman 1994). The type of relationship (cohabitation or

marriage) is controlled to account for the selective nature of cohabitation; people who choose to cohabit tend to be more liberal, less religious, and to hold more egalitarian sex role attitudes than their non-cohabiting peers (Clarkberg et al 1995, Lye & Waldron 1997, Thornton et al 1992). In addition, Brown and Booth (1996) find that as a group cohabitors report lower relationship quality than married partners, though when plans to marry are taken into consideration, the difference between cohabiters who plan to marry and married couples disappears. Gender of the focal child is controlled because mothers may hold different preferences for the family behaviors of sons than daughters; for example, Barber (2000) reports that mothers prefer earlier marriage and less education for daughters than for sons. Also, the influence of family attitudes on partner relationship quality differs for men and women; for example, more egalitarian gender role attitudes are associated with higher relationship satisfaction among women, but lower satisfaction among men (Amato and Booth 1995; Cherlin 2000). Furthermore, some studies indicate that women as a group report lower relationship quality than men (Amato et al. 2003).

METHODS

Data

Intergenerational Panel Study of Mothers and Children

Data used in this analysis come from the Intergenerational Panel Study of Mothers and Children (IPS), a 31-year, eight-wave panel study of 1113 married White mothers and their children in the Detroit metropolitan area. The probability sample was drawn from birth records of mothers who gave birth to a first, second, or fourth child in 1961. The mothers were interviewed within a year of the focal child's birth, and then again in late 1962, 1963, 1966, 1977, 1980, 1985, and 1993. The focal children were also

interviewed in 1980 (at age 18), 1985, and 1993. IPS has maintained high response rates throughout the study period, with 87% of the original 1113 mother-child pairs still in the sample in 1993 (Thornton, Axinn & Xie 2007). The analysis sample (n=508) is restricted to cases where the child had never been married by 1980, but reports that he/she is currently married or cohabiting in 1993, and where the mother is currently married in 1980. Children already married or cohabiting by the 1980 interview are excluded to maintain proper time-order in the measurement of attitudes and subsequent relationship quality. Mothers who were not married in 1980 are excluded because they do not contribute to the measure of mother's marital quality, a key control variable.

IPS is uniquely suited to my analysis of the influence of maternal attitudes on adult children's partner relationship quality. Multiple waves of data about the mothers and children over the 31-year period provide rich information about the attitudes and characteristics hypothesized to influence children's partner relationship quality. Rather than relying on children's retrospective reports alone, data about family characteristics are collected prospectively from both the mothers and children, reducing measurement error due to faulty memories.

Perhaps the most important disadvantage of IPS for my analyses is the sample's limitation to White mothers in the Detroit Metropolitan area in 1961, which limits the generalizability of my results racially, geographically, and temporally. Further, though it is highly desirable to be able to study the influences of both parents on children, I am limited to mother-child pairs only. However, despite these limitations, the rarity of multi-wave, multiple-informant data (with acceptably high response rates) makes IPS invaluable to the study of family influences on adult children's partner relationship

quality. Table 1 shows the means and standard deviations of measures used in the analysis.

(Table 4.1 about here)

Measures

One of the most important recent developments in the study of marital quality is the reconceptualization of marital quality as a two-dimensional construct reflecting both positive and negative components (Bradbury, Fincham, and Beach 2000). The positive dimension might include measures of marital happiness, interaction, and enjoyment of activities, while the negative dimension includes items such as conflict, disagreements, and physical abuse. While the two dimensions are related, they are also distinct, and may not yield equivalent results (Orden and Bradburn 1968). Consistent with factor analytic research on the measurement of marital quality (Johnson et al. 1986; Fincham and Linfield 1997; Fincham and Bradbury 1987), I use the two-dimensional approach, modeling positive and negative dimensions of relationship quality as separate dependent variables. Thus, children's relationship quality in 1993 is measured by two indices. An index of positive dimensions of relationship quality is created from the following questions:

- "How well do you think your (husband/wife/partner) understands you—your feelings, your likes and dislikes, and any problems you may have?" (*very well*, *fairly well*, *not very well*, *not well at all*)
- "And how well do you think you understand your (husband/wife/partner)? (*very well—not well at all*)
- "Generally speaking, would you say that the time you spend together with your (husband/wife/partner) is *extremely enjoyable*, *very enjoyable*, *enjoyable*, or *not too enjoyable*?"

- "Taking things all together, how would you describe your relationship—would you say your relationship was *very happy*, *a little happier than average, just about average,* or *not too happy*?"
- "(He/She) gives you the right amount of affection. Is that *always, usually, sometimes,* or *never* true?"
- "When something is bothering you, you are able to talk it over with (him/her). Is that *always, usually, sometimes,* or *never* true?"

Each measure is coded so that higher values indicate higher relationship quality, and the six are averaged together to form an index of positive dimensions of relationship quality ranging from one to four (alpha=.81). Though the six questions comprising the positive dimensions of relationship quality represent distinct dimensions—relationship happiness and relationship interaction (Johnson et al. 1986)—henceforth I refer to the positive dimensions as "relationship happiness."

An index of negative dimensions of relationship quality is created from the following questions:

- "How often do you and your (husband/wife/partner) typically have unpleasant disagreements or conflicts—would you say *very often, often, sometimes, rarely,* or *never*?"
- "Would you say that you have problems getting along with each other *often, sometimes, hardly ever,* or *never*?"
- "How often do you feel your (husband/wife/partner) makes too many demands on you—*often, sometimes, hardly ever,* or *never*?"
- "How often is (he/she) critical of you or what you do—*often, sometimes, hardly ever,* or *never*?"

Each variable is coded so that higher values indicate higher relationship quality, and all four are averaged together to form an index of negative dimensions of relationship quality ranging from one to 4.25 (alpha=.77), referred to from here forward as "relationship discord." The mean score on the index of relationship happiness was 3.30, indicating a relatively high level of perceived relationship quality as measured by the

positive dimensions. However, when measured by relationship discord, mean relationship quality was slightly lower, at 2.80. This difference indicates that for most respondents partner relationships are neither all positive nor all negative; most consist of a mixture of happiness and discord.

Family Attitudes

Family attitudes were measured from both mothers and children in 1980, when the children were 18 years old. Attitudes examined in this analysis include views on sex roles, cohabitation, and premarital sex. Except where noted, identical questions were asked of mothers and children for each attitude.

To measure sex role attitudes, mothers and children were asked to respond to eight statements:

- "Most of the important decisions in the life of the family should be made by the man of the house."
- "It's perfectly alright for women to be very active in clubs, politics, and other outside activities before the children are grown up."
- There is some work that is men's and some that is women's and they should not be doing each others'."
- "A wife should not expect her husband to help around the house after he comes home from a hard days' work."
- "A working mother can establish as warm and secure a relationship with her children as a mother who does not work."
- "It is much better for everyone if the man earns the main living and the woman takes care of the home and family."
- "Women are much happier if they stay at home and take care of their children."
- "It is more important for a wife to help her husband's career than to have one herself."

Answer choices for each question ranged on a five-point scale, from "Strongly Agree" to "Strongly Disagree." Responses were coded so that higher values indicate more egalitarian sex role attitudes, and averaged together to form an index ranging from one to five. Mothers and children in the sample held similar sex role attitudes, with a mean

score of 3.36 for mothers and 3.46 for children, indicating a slight preference for more egalitarian sex roles.

To gauge attitudes toward cohabitation, mothers and children were asked, "It's alright for a couple to live together without planning to get married;" and, "A young couple should not live together unless they are married." Answer choices ranged on a five-point Likert scale, from strongly agree to strongly disagree. Responses to each statement were coded so that higher values indicate more tolerant attitudes toward cohabitation. Responses to both statements were then averaged together to form a composite measure, ranging from one to five. Children showed higher tolerance for cohabitation than their mothers, with means of 2.45 and 1.96, respectively.

Attitudes toward premarital sex were measured from both mothers and children by their level of agreement with two statements: "Young people should not have sex before marriage;" and, "Premarital sex is alright for a young couple planning to get married." Answers ranged from "strongly agree" to "strongly disagree" with a middle category for noncommittal, and were coded so that higher values indicate greater tolerance for premarital sex. The mean response to both questions is used as a composite measure of premarital sex attitudes, and ranges from one to five. As with cohabitation, children's attitudes toward premarital sex were on average more tolerant than were their mothers', with a mean score of 3.43 for children, compared to 2.44 for the mothers.

Controls

Relationship duration is calculated based on monthly life history calendar measures of co-residence with the current partner (within either marriage or non-marital cohabitation). Because the data do not contain a measure of the start of the relationship, I

use duration of co-residence as a proxy. Duration of co-residence is coded into five dichotomous categories: 24 months or less; 25 to 60 months (two to five years); 61 to 84 months (five to seven years); 85 to 108 months (seven to nine years); and over 108 months. The plurality of relationships fell into the two to five year category (27%), followed by nearly equal proportions in the two-year, five to seven-year, and seven to nine-year categories. Sixteen percent of children in the sample reported co-residing with their partner for over nine years. It's important to note that because the focal children were all born in the same year (1961), duration of co-residence is inversely proportional to age at first co-residence—that is, the longer the relationship, the younger the age at relationship start.

Mother's positive marital relationship quality dimensions were measured in 1980 with the questions, "How well do you think your husband understands you—your feelings, your likes and dislikes, and any problems you may have?" (*very well, fairly well, not very well, not well at all*); "And how well do you think you understand your husband?" (*very well—not well at all*); "Generally speaking, would you say that the time you spend together with your husband is *extremely enjoyable, very enjoyable*, *enjoyable*, or *not too enjoyable*?"; and, "Taking things all together, how would you describe your marriage—would you say your relationship was *very happy, a little happier than average, just about average*, or *not too happy*?" All variables are coded so that higher values indicate higher relationship quality. All four measures were averaged together to form an index of marital happiness ranging from one to four. Mothers' mean marital relationship quality as measured by the marital happiness index was 3.20, indicating relatively high marital quality.

Mother's negative marital relationship quality dimensions were measured in 1980 with two questions: "How often do you disagree with your husband about how much money to spend on various things—*very often, often, sometimes, rarely, or never*?"; and "Even happily married couples sometimes have problems getting along with each other. Would you say that this happens with you *often, sometimes, hardly ever, or never*?" Answers to both questions were coded so that higher values reflect higher relationship quality, and were averaged together to form an index of marital discord ranging from one to 4.5. As measured by the index of marital discord, mothers' mean marital quality was 2.93, slightly lower than quality based on measures of marital happiness.

Parent-child relationship quality is measured in 1980 from the mother's point of view, because children who over-report their own partner relationship quality may also over-report their parent-child relationship quality. Mothers were read four statements about their relationship with the focal child, and asked to report whether each was *always, usually, sometimes,* or *never* true: "[Name's] ideas and opinions about the important things in life are ones you can respect;" "[He/She] respects your ideas and opinions about the important things in life;" "You find it easy to understand [him/her];" and , "You enjoy doing things together with [Name]." For all questions, answers were coded so that higher values indicate higher relationship quality. Responses from all four were averaged to form an index of parent-child relationship quality, ranging from one to four, with a mean of 3.16.

Mothers' average financial resources were measured in 1962 (when the focal child was about 1 year old), and include the sum of total family income plus savings and assets for the year prior to interview, coded in thousands of dollars. The top level of

family income is capped at $15,000 or more. Mother's marital experience includes marital events taking place between 1962 and 1980, and is coded dichotomously as "stably married" (1) or "not stably married" (0).

Average education level of the focal child and their partner was measured in 1993 and ranges from 8 (eighth grade) to 17 (five or more years of college). The mean child/partner educational level was 13.9, corresponding to a couple average of just under two years of college. Dummy variables were created to indicate whether the focal child's relationship was a cohabitation (as opposed to a marriage), and whether the focal child was female. Nine percent of the relationships in question were cohabitations. Fifty-two percent of focal children were female.

Analytic Strategy

I use ordinary least squares (OLS) regression to model the effects of maternal family attitudes on adult children's partner relationship quality. For each dependent variable (relationship happiness and relationship discord) I use an identical modeling strategy, starting with a base model that includes measures of mother's marital quality, parent-child relationship quality, family financial resources in early childhood, mothers' marital stability, focal child/partner education level, whether the relationship is non-marital cohabitation, and the gender of the focal child. Each family attitude is added to the base model separately, in four steps. First, I model the direct effect of each maternal attitude on children's partner relationship quality. Then, I add the focal child's attitude to each model, to examine the indirect influence of maternal family attitudes on adult children's partner relationship quality. To each of these models I then add a set of

controls for duration of co-residence, as a proxy for relationship duration/age at relationship start.

It is important to note the potential selection bias introduced by limiting the analysis to sample children who are married or cohabiting at the time of the 1993 interview. The sample represents a group of young adults who entered marital and cohabiting unions by age 31. Due to their relatively young age at union formation, this group may be more likely to be influenced by their parents' attitudes than would children who formed a relationship at older ages (Cunningham 2001). In addition, because these analyses focus only on children who were married or cohabiting at the time of the 1993 interview, children who had already married or cohabited, but dissolved the relationship prior to interview are excluded[9] from the analysis. Because the outcome of interest is relationship quality, rather than relationship success or stability, there is really no methodological silver bullet for this particular selection issue (Norton 1983).

RESULTS

(Table 4.2 about here)

Table 4.2 shows the OLS regression estimates of the effects of maternal sex role attitudes on adult children's partner relationship quality. Partner relationship quality is measured in two ways: dimensions of happiness, and dimensions of discord. For both dependent variables, higher values indicate higher relationship quality. Models one through four show the direct and indirect effects of mother's sex role attitudes in 1980 on the focal child's partner relationship quality in 1993, as measured by dimensions of relationship *happiness*. Model 1 shows the direct effect of mother's sex role attitudes

[9] Approximately 16% of children in the study had ever entered a cohabiting or marital union, but were not currently in such a union at the 1993 interview.

(coded so that higher values indicate more egalitarian sex role attitudes) on relationship quality, with controls for mother's marital quality, mother-child relationship quality, average financial resources in 1961, mother's marital history, and selected characteristics of the child/partnership, including child/partner average education, whether or not the relationship is cohabitation, and whether or not the child is female. The results indicate a negative relationship between mothers' egalitarianism and children's relationship quality. As hypothesized. When children's own sex role attitudes are added to the model, but duration of co-residence is not controlled (model 2), the effect of mothers' sex role attitudes is no longer statistically significant. This suggests that mothers' sex role attitudes influence children's relationship quality by influencing children's own sex role attitudes. The effect of children's own sex role attitudes is unchanged by the addition of relationship duration to the model (model 4). However, with the addition of controls for duration, mother's sex role attitudes maintain a marginally significant effect on relationship quality. Mother's marital quality, mother-child relationship quality, mother's financial resources, and child/partner education were positively associated with relationship quality; in addition, children whose relationships consisted of non-marital cohabitation reported higher relationship happiness than did children in marriages.

Models four through eight represent the influence of mothers' sex role attitudes on children's relationship quality as measured by dimensions of *discord*. Again, the results indicate a negative association between mother's sex role attitudes and child's relationship quality, so that children of more egalitarian mothers reported lower relationship quality (greater relationship discord) than children of less-egalitarian mothers. Interestingly, when relationship quality was characterized in terms of discord,

children's own sex-role attitudes had no significant influence on relationship quality, and the effect of mother's sex role attitudes remained significant even when children's attitudes and relationship duration were controlled (model 8). This is consistent with my general hypothesis: maternal attitudes that encourage marriage will be associated with higher relationship quality, and maternal attitudes that discourage or delay marriage (i.e. gender egalitarianism) will be associated with lower partner relationship quality. That the effect remains even when children's own attitudes, education, and relationship duration are controlled suggests that gender-egalitarian mothers behave differently toward their children than do mothers with less gender-egalitarian sex role attitudes. It's possible that these mothers are somehow less active in supporting or validating their child's relationship than their less-egalitarian counterparts.

(Table 4.3 about here)

Table 4.3 presents OLS regression estimates of the effects of mothers' cohabitation attitudes on adult children's partner relationship quality, as measured by relationship happiness and relationship discord. Models one through four show the influence of mother's cohabitation attitudes on children's relationship happiness. Both mothers' and children's cohabitation attitudes are coded so that higher values indicate more tolerant attitudes toward cohabitation. Taken together, the results show a negative relationship between mother's tolerance for cohabitation and children's relationship happiness, even when children's own cohabitation attitudes, relationship duration, and current cohabitation status are controlled. The effect of mothers' cohabitation attitude on relationship quality remains unchanged when relationship duration is added to the model. This suggests that the mechanism by which mothers' cohabitation attitude operates is not

by speeding age at co-residence for children of cohabitation-tolerant mothers, compared to their peers. Rather, some parental social support behavior is more likely at play.

When relationship quality is measured by dimensions of discord (models 5 to 8), neither mothers' nor children's cohabitation attitudes are significantly related to relationship quality. However, relationship duration was significantly related to reports of discord. Children in couples who had co-resided for 7 to 9 years reported significantly lower relationship quality than did any other groups. In addition, children whose mothers reported lower marital discord (higher marital quality), and those who reported higher mother-child relationship quality had higher partner relationship quality than their peers. Family financial resources, child/partner education, cohabitation, and being female were all positively related to children's partner relationship quality as measured by dimensions of discord.

(Table 4.4 about here)

Table 4.4 shows OLS regression estimates of the effects of mothers' premarital sex attitudes on adult children's partner relationship quality. Models one through four show a small negative influence of mother's tolerance of premarital sex on children's partner relationship quality, as measured by dimensions of happiness. However, when children's own premarital sex attitudes are controlled, mothers' attitudes are no longer significant, indicating that mothers' premarital sex attitudes influence children's relationship happiness through children's own attitudes. Neither of the effects of mothers' nor children's tolerance for premarital sex were reduced when relationship duration was included in the models, indicating that the effect of premarital sex attitudes does not operate by speeding or slowing entrance into co-residential union. However, it's

possible that age at relationship formation plays an unmeasured role in this effect. Because IPS does not contain a measure of when the relationship began (or became serious), I can only measure when the partners began living together. For children with more tolerant attitudes toward premarital sex, however, it's possible that measuring duration from the start of co-residence is a less accurate representation of when the relationship actually became serious than it would be for children with low tolerance for premarital sex, who, presumably, are less likely to commence a sexual relationship before marriage, or at least engagement. If this is the case, it would imply that the age of actual relationship formation for sex-tolerant children is disproportionately overestimated compared to their sex-intolerant peers.

Models five through 8 show that when relationship quality is measured by dimensions of discord, neither mothers' nor children's premarital sex attitudes significantly influence relationship quality. Mother's marital quality (measured by dimensions of discord), mother-child relationship quality, family financial resources, child/partner education, cohabiting, and being female were all positively related to children's partner relationship quality when measured by discord. In addition, couples who had co-resided between 7 to 9 years reported lower relationship quality (higher discord) than all other groups.

DISCUSSION

This paper sought to expand the literature on parental influences on children's family behaviors by investigating the influence of mothers' family attitudes on their adult children's marital/cohabiting relationship quality. I make use of a dual conceptualization of relationship quality, which separates positive dimensions of relationship quality

(happiness) from negative dimensions (relationship discord). The results show that mothers' egalitarian sex role attitudes are negatively related to children's relationship quality, as measured both by dimensions of happiness and discord. Mothers' tolerance for cohabitation is also negatively related to children's relationship happiness, even when children's own cohabitation attitudes, relationship duration, and current cohabitation status are controlled. However, when relationship quality is measured by dimensions of discord, neither mothers' nor children's cohabitation attitudes are significantly related to relationship quality. Mothers' premarital sex attitudes showed no direct effects on either relationship happiness or discord, though they appear to have some small indirect influence on relationship happiness, through children's own attitudes.

In general the results support my overarching hypothesis: parental attitudes that encourage marriage are associated with higher partner relationship quality among children, and parental attitudes that discourage or delay marriage are negatively related to partner relationship quality, whether the relationship is marriage or cohabitation. My results suggest that the mechanism by which mothers' attitudes operate is not by speeding age at co-residence for children. Rather, some social or material support behavior is more likely at play for most of the relationships displayed.

Although significant effects of mothers' attitudes were demonstrated, these models explain only a very small portion of the variation in children's partner relationship quality. Research has shown that most of the variation in relationship quality is explained by within-couple interactional processes and husband-wife differences and similarities in expectations, role performance, self-image, communication, values, and many others (Rhyne 1981; Larson and Holman 1994). However, despite the relatively

small size of the effects, by identifying previously unmeasured ways in which parental attitudes influence children's behaviors and experiences, this paper makes an important contribution to the literature on intergenerational ideational influences within the family.

In addition to its contribution to body of work on family ideational influences, this paper contributes evidence in favor of the two-dimensional approach to measuring relationship quality. My results showed that characteristics which influenced relationship quality when measured by dimensions of happiness did not necessarily have the same effect on relationship quality as measured by dimensions of discord, and vice versa. For example, duration of co-residence was not significantly related to relationship happiness for any of the maternal attitudes, but was a significant influence on relationship discord. This effect likely would have been buried if dimensions of happiness and discord were combined into a single measure.

Limitations:

The key limitations of these data are limits to generalizability, in terms of geography, temporality, and race/ethnicity. The sample is limited to White mothers in the Detroit Metropolitan area in 1961, which presents significant challenges. Geographic location is perhaps the least worrisome of the sample's limitations. Several studies using this data have found results that generally were consistent with national studies (Thornton and Axinn 1996; Thornton, Freedman, and Axinn 2002), and the population of Michigan itself appears to demonstrate marital and childbearing behaviors that align with national averages (Lesthaeghe and Neidert 2006; Thornton, Axinn, and Xie 2007). There is no theory to suggest that Michigan's relationship quality influences also do not also fall in this middle range.

The sample's limitations in terms of race and temporality are more troublesome. Because the sample included only White mothers and children, my results cannot be generalized to other race/ethnic populations. It is highly possible that specific parental attitudinal influences on marital quality are different among different racial/ethnic groups. Though there are few race/ethnic differences in cohabitation behavior (Bumpass and Lu 2000), there are fairly large Black/White disparities in marriage rates (Smock 2000). Future research into the influences of maternal attitudes on children's marital quality would benefit from nationally representative, or perhaps minority-specific samples to investigate whether different patterns emerge in a non-white sample.

Temporal generalizability is certainly a problem for this study. The cohort of sample children were all born in 1961, and grew up in a period of great change in family attitudes and behaviors (Thornton, Axinn, and Xie 2007). Therefore, their socialization experiences may differ significantly from previous and subsequent cohorts. In particular, some measures of family attitudes that were appropriate in 1962 would appear outdated and/or inapplicable to a more recent sample. However, though some measures might be outdated if repeated today, they yield important insight into the maternal influences on marital quality for the 1961 cohort, some number of whom, at age 48, are still in the relationships examined in this paper.

Certainly further study of the influences of parental family attitudes on children's partner relationship quality would benefit from more recent, nationally representative data, and from measures of characteristics from fathers and partners, in addition to mothers. However, in the absence of this ideal, the strengths of IPS are notable; separate interviews from both mothers and children in multiple waves, and detailed measurement

of multiple family attitudes have provided the opportunity to gain new insight into the process by which mothers influence their adult children's outcomes.

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Table 4.1. Means and Standard Deviations of Measures Used in Analysis

	Mean	Std. Dev.	Min	Max
Dependent Variables:				
Child's Partner Relationship Quality in 1993				
Relationship Happiness	3.30	0.51	1.33	4
Relationship Discord	2.80	0.57	1	4.25
1980 Family Attitudes:				
Sex roles-Mother	3.36	0.67	1.125	5
Sex roles-Child	3.46	0.65	1.5	5
Cohabitation-Mother	1.96	0.61	1	4
Cohabitation-Child	2.45	0.79	1	4
Premarital Sex-Mother	2.44	0.98	1	4.5
Premarital Sex-Child	3.43	1.11	1	5
Controls:				
Duration of co-residence:				
24 months or less (2 years)	0.20	0.26	0	1
25 to 60 months (2 to 5 years)	0.27	0.16	0	1
61 to 84 months (5 to 7 years)	0.18	0.09	0	1
85 to 108 months (7 to 9 years)	0.19	0.20	0	1
Over 108 months (over 9 years)	0.16	0.31	0	1
Mother's 1980 marital quality (positive dimensions)	3.20	0.61	1	4
Mother's 1980 marital quality (negative dimensions)	2.93	0.59	1	4.5
Mother-Child relationship quality 1980	3.16	0.52	1.25	4
Average Financial Resources (in $thousands) 1961	4.65	2.69	0.425	16.25
Mother stably married 1962-1980	0.92	0.27	0	1
Child/Partner average education 1993	13.90	1.80	8	17
Relationship is cohabitation	0.09	0.29	0	1
Child is female	0.52	0.50	0	1

N=508

Table 4.2. OLS Regression Estimates of the Effects of Maternal Sex Role Attitudes on Adult Children's Partner Relationship Quality

	Relationship Quality (higher values=higher quality)							
	Dimensions of Happiness				Dimensions of Discord			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
1980 Family Attitudes toward:								
Sex Roles								
Mother	-.08 **	-.05	-.08 **	-.05 +	-.09 *	-.08 *	-.08 *	-.08 *
	(-2.41)	(-1.25)	(-2.42)	(-1.30)	(-2.23)	(-2.01)	(-2.12)	(-1.96)
Child		-.13 ***		-.13 ***		-.02		-.01
		(-3.48)		(-3.41)		(-.38)		(-.17)
Duration of co-residence								
24 months or less (2 years)			.08	.08			.11	.11
			(1.08)	(.99)			(1.26)	(1.25)
25 to 60 months (2 to 5 years)			.03	.02			.19 **	.19 **
			(.39)	(.25)			(2.51)	(2.50)
61 to 84 months (5 to 7 years)			.01	.00			.10	.09
			(.09)	-(.03)			(1.13)	(1.12)
85 to 108 months (7 to 9 years)			REF	REF			REF	REF
Over 108 months (over 9 years)			.07	.04			.18 *	.18 *
			(.86)	(.55)			(2.05)	(2.02)
Controls								
Mother's 1980 marital quality	.02	.02	.02	.02	-.03	-.03	-.03	-.03
(dimensions of happiness)	(.51)	(.37)	(.46)	(.34)	(-.54)	(-.55)	(-.63)	(-.64)
Mother's 1980 marital quality	.05	.06 +	.05	.06 +	.10 *	.10 *	.10 *	.10 *
(dimensions of discord)	(1.16)	(1.36)	(1.16)	(1.37)	(2.23)	(2.24)	(2.22)	(2.22)
Mother-child relationship quality (1980)	.06 +	.06 +	.06 +	.06 +	.08 +	.08 +	.08 +	.08 +
	(1.36)	(1.33)	(1.34)	(1.32)	(1.61)	(1.61)	(1.53)	(1.53)
Average Financial Resources (1961)	.02 **	.02 **	.02 **	.02 **	.03 **	.03 **	.03 **	.03 **
(in thousands)	(2.71)	(2.72)	(2.62)	(2.62)	(2.67)	(2.66)	(2.61)	(2.61)
Mother stably married 1962-1980	.07	.06	.08	.07	-.08	-.08	-.08	-.08
	(.82)	(.69)	(.93)	(.80)	(-.84)	(-.85)	(-.76)	(-.77)
Child/Partner average education (1993)	.05 ***	.06 ***	.05 ***	.06 ***	.03 *	.03 *	.03 *	.03 *
	(3.46)	(4.00)	(3.57)	(4.07)	(1.83)	(1.86)	(1.82)	(1.82)
Relationship is cohabitation	.12 +	.15 *	.10	.12 +	.16 *	.16 *	.15 *	.16 *
	(1.55)	(1.88)	(1.19)	(1.47)	(1.82)	(1.85)	(1.65)	(1.65)
Child is female	.01	.04	.01	.04	.13 **	.14 **	.13 **	.13 **
	(.21)	(.89)	(.12)	(.82)	(2.58)	(2.59)	(2.50)	(2.48)
N	478	478	478	478	478	478	478	478

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

Table 4.3. OLS Regression Estimates of the Effects of Maternal Cohabitation Attitudes on Adult Children's Partner Relationship Quality

	Relationship Quality (higher values=higher quality)							
	Dimensions of Happiness				Dimensions of Discord			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
1980 Family Attitudes toward:								
Cohabitation								
Mother	-.12 **	-.09 *	-.12 ***	-.09 *	-.06	-.04	-.06	-.04
	(-3.02)	(-2.12)	(-3.12)	(-2.25)	(-1.27)	(-.81)	(-1.25)	(-.81)
Child		-.07 *		-.07 *		-.04		-.04
		(-2.27)		(-2.26)		(-1.17)		(-1.07)
Duration of co-residence								
24 months or less (2 years)			.11 +	.11 +			.11 +	.13 +
			(1.35)	(1.49)			(1.30)	(1.43)
25 to 60 months (2 to 5 years)			.04	.05			.20 **	.21 **
			(.57)	(.70)			(2.58)	(2.71)
61 to 84 months (5 to 7 years)			.02	.03			.10	.11 +
			(.27)	(.34)			(1.19)	(1.29)
85 to 108 months (7 to 9 years)			REF	REF			REF	REF
Over 108 months (over 9 years)			.07	.06			.18 *	.18 *
			(.85)	(.81)			(1.99)	(2.05)
Controls								
Mother's 1980 marital quality	.02	.02	.02	.02	-.03	-.02	-.03	-.03
(dimensions of happiness)	(.44)	(.52)	(.37)	(.46)	(-.47)	(-.39)	(-.57)	(-.49)
Mother's 1980 marital quality	.04	.04	.04	.04	.11 *	.10 *	.10 *	.10 *
(dimensions of discord)	(1.05)	(1.02)	(1.04)	(1.00)	(2.27)	(2.20)	(2.25)	(2.17)
Mother-child relationship quality (1980)	.07 +	.05	.07 +	.05	.09 *	.08 +	.08 +	.08 +
	(1.43)	(1.12)	(1.44)	(1.13)	(1.67)	(1.49)	(1.59)	(1.42)
Average Financial Resources (1961)	.02 **	.03 **	.02 **	.02 **	.03 **	.03 **	.03 **	.03 **
(in thousands)	(2.79)	(2.84)	(2.67)	(2.72)	(2.67)	(2.69)	(2.62)	(2.63)
Mother stably married 1962-1980	.04	.01	.05	.03	-.09	-.10	-.08	-.10
	(.41)	(.16)	(.52)	(.28)	(-.88)	(-1.02)	(-.83)	(-.97)
Child/Partner average education (1993)	.04 **	.04 **	.04 ***	.04 ***	.02 +	.02 +	.02 +	.02 +
	(3.03)	(3.06)	(3.11)	(3.13)	(1.49)	(1.57)	(1.46)	(1.56)
Relationship is cohabitation	.12 +	.13 *	.09	.09	.16 *	.16 *	.15 +	.15 +
	(1.55)	(1.65)	(1.08)	(1.12)	(1.79)	(1.85)	(1.59)	(1.61)
Child is female	.01	-.01	.00	-.01	.14 **	.13 **	.13 **	.13 **
	(.11)	(-.10)	(.03)	(-.16)	(2.60)	(2.52)	(2.52)	(2.47)
N	477	476	477	476	477	476	477	476

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

Table 4.4. OLS Regression Estimates of the Effects of Maternal Premarital Sex Attitudes on Adult Children's Partner Relationship Quality

	Relationship Quality (higher values=higher quality)							
	Dimensions of Happiness				Dimensions of Discord			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
1980 Family Attitudes toward:								
Premarital Sex								
Mother	-.05 *	-.03	-.05 *	-.03	-.04 +	-.03	-.03	-.03
	(-2.00)	(-1.19)	(-2.00)	(-1.21)	(-1.41)	(-1.11)	(-1.22)	(-.90)
Child		-.05 *		-.05 *		-.02		-.02
		(-2.30)		(-2.27)		(-.68)		(-.65)
Duration of co-residence								
24 months or less (2 years)			.09	.10 +			.11	.12 +
			(1.10)	(1.29)			(1.24)	(1.39)
25 to 60 months (2 to 5 years)			.03	.05			.19 **	.21 **
			(.36)	(.68)			(2.49)	(2.70)
61 to 84 months (5 to 7 years)			.01	.02			.10	.11 +
			(.18)	(.32)			(1.18)	(1.31)
85 to 108 months (7 to 9 years)			REF	REF			REF	REF
Over 108 months (over 9 years)			.07	.08			.19 *	.20 *
			(.87)	(.94)			(2.09)	(2.21)
Controls								
Mother's 1980 marital quality	.02	.02	.01	.01	-.03	-.03	-.04	-.03
(dimensions of happiness)	(.36)	(.33)	(.30)	(.28)	(-.60)	(-.56)	(-.68)	(-.64)
Mother's 1980 marital quality	.05	.05	.05	.05	.11 *	.10 *	.11 *	.10 *
(dimensions of discord)	(1.23)	(1.19)	(1.23)	(1.18)	(2.30)	(2.23)	(2.28)	(2.20)
Mother-child relationship quality (1980)	.07 +	.05	.07 +	.05	.09 *	.08 +	.09 +	.08 +
	(1.46)	(1.16)	(1.45)	(1.15)	(1.70)	(1.60)	(1.63)	(1.50)
Average Financial Resources (1961)	.02 **	.02 **	.02 **	.02 **	.03 **	.03 **	.03 **	.03 **
(in thousands)	(2.76)	(2.75)	(2.67)	(2.64)	(2.67)	(2.64)	(2.62)	(2.56)
Mother stably married 1962-1980	.05	.04	.06	.05	-.09	-.10	-.08	-.09
	(.60)	(.42)	(.71)	(.54)	(-.91)	(-.97)	(-.82)	(-.88)
Child/Partner average education (1993)	.04 ***	.04 **	.05 ***	.04 ***	.02 +	.03 +	.02 +	.03 +
	(3.13)	(3.07)	(3.24)	(3.16)	(1.53)	(1.58)	(1.53)	(1.60)
Relationship is cohabitation	.12 +	.13 +	.10	.10	.16 *	.16 *	.15 +	.15 +
	(1.55)	(1.61)	(1.18)	(1.19)	(1.79)	(1.82)	(1.63)	(1.63)
Child is female	.02	.00	.01	.00	.14 **	.14 **	.14 **	.13 **
	(.32)	(.01)	(.23)	-(.05)	(2.70)	(2.61)	(2.62)	(2.55)
N	478	475	478	475	478	475	478	475

†p<.10 *p<.05 **p<.01 ***p<.001 (one-tailed)

CHAPTER V.

CONCLUSION

In this dissertation, I address four questions about the intergenerational transmission of family attitudes and behaviors: (1) How do early family characteristics influence children's perceptions of their mothers' attitudes toward family behaviors later in life? (2) How is mothers' sex-themed communication related to the accuracy of teens' perceptions of their mothers' attitudes toward sex? (3) How is family structure related to the accuracy of teens' perceptions of their mothers' attitudes toward sex? And (4) How do mothers' family attitudes influence their adult children's marital/cohabiting relationship quality?

Chapter II: Children's Perceptions of their Parents' Attitudes: The Role of Family Context

In Chapter II, I examine the influence of family context early in life on children's perceptions of their mothers' attitudes toward marriage and childbearing in late adolescence. Specifically, I look at early life measures of family integration, religion, socioeconomic status, and mother's marital/childbearing experience. I also consider gender differences in the relationship between family context and children's perceptions of their mothers' attitudes. I argue that children make inferences about their parents' attitudes and values from some combination of explicit messages *and* family context, which includes parental behavior, background, religion, friendships, and more.

The results show that among daughters, mothers' religious affiliation, age at first marriage, experience of divorce and socioeconomic status all significantly influence perceptions of mothers' marriage preferences, even when mothers' and daughters' actual preferences are controlled. The same dimensions of family context influence daughters' perceptions of their mothers' childbearing preferences.

Among sons, only family support networks influenced perceptions of mothers' marriage preferences as hypothesized. In contrast, mothers' religious affiliation and religiosity influenced sons' perceptions of their mothers' marriage preference in the opposite direction as hypothesized, with sons of fundamentalist Protestant mothers, and sons of more religious mothers perceiving their mothers to be less disappointed if they never marry than sons of mainline Protestant and less religious mothers. Sons of more religious mothers also perceived their mothers to be less disappointed if they never have children than did sons of less religious mothers, which was also opposite the hypothesized direction. Other dimensions which significantly influenced sons perceptions of their mothers childbearing preferences included family social networks, mothers' religious affiliation, and socioeconomic status.

This analysis makes an important contribution to the literature on children's perceptions of their parents' attitudes because it demonstrates the importance of factors beyond parents' explicit messages for the development of perceptions. The effects of family context I find all operate independently of mothers' and children's actual preferences; this suggests that mothers aren't directly or clearly communicating their marital and childbearing preferences. If that were the case, mothers' actual attitudes should account for the variation in children's perceptions. Instead, children appear to

infer their mothers' attitudes from some combination of what she says, how she behaves, her background, her religion, who she hangs around with, etc—in short, from a combination of messages and context.

Chapter III: Parental Communication, Family Structure, and the Accuracy of Children's Perceptions of their Mother's Attitudes toward Sex

In this paper, I sought to expand the literature on the effects of parental attitudes on teens' sexual behaviors by exploring the correlates of teens' *accuracy* in perceiving their mothers' attitudes toward sex, including mothers' reports of her attitudes toward communicating about sex, the frequency of sex-related communication with the child, and dimensions of family structure, including birth order and sibling sex composition.

The results show that while children more accurately perceived their mothers' attitudes toward sex when the mothers' held positive attitudes toward talking about sex, mothers' reports of actual sex-related communications had almost no relationship to accuracy. One likely explanation for this finding is that parents' reports of sex-related communication behaviors often don't reflect teens' reports of the same behaviors—that is, parents' and teens often don't agree as to what constitutes a conversation about sex. This indicates that while mothers may believe they are communicating messages about sex, at least for some teens the messages remain unheard.

In investigating the influence of family structure on accuracy, I found that, holding mother's sex communication attitudes and behaviors constant, lastborn and only children are less accurate at perceiving their mother's attitude toward sex than are firstborn children. These results suggest that firstborn children benefit (in terms of accuracy) from the presence of younger siblings. This is consistent with research into the

influence of birth order on intellectual ability, which has noted a similar congruence between only-children and last-born children, leading to the idea of the *teaching function*—the idea that having a younger sibling allows the older child to assume the role of tutor, which may benefit them more than the younger sibling.

Though birth order appears to play a significant role in children's accuracy, sibling sex composition showed much more mixed results. For girls, sibling sex composition was not related to accuracy. For boys, some group differences emerged, but no clear theoretical pattern was supported. One likely explanation for this result is that the analysis failed to account for interactions among dimensions of family structure, therefore obscuring the meaning of the results. For example, given the relationship between birth order and accuracy, it's likely that birth order interacts with sibling sex composition in some way, so that being an firstborn boy with only sisters might have profoundly different implications for accuracy as being a lastborn or middle-born boy with those same sisters. Future studies would benefit from the examination of multiple combinations of birth order and sex composition, as well as the additional complexity of birth spacing, which might shed further light on the dimensions of family structure most salient for the accurate perception of parental attitudes. Data containing both mothers' and fathers' attitudes and children's perceptions of those attitudes would likely also further our understanding of the role of family structure in children's accurate perceptions, and thus better understand the key mechanism through which parental attitudes are passed to the next generation.

Chapter IV: Maternal Influences on Marital Quality

In Chapter IV, I investigated the influence of mothers' family attitudes on their adult children's marital/cohabiting relationship quality. Parents' family attitudes have been found to influence other domains of their children's family formation behaviors, including marriage, cohabitation, and childbearing. Following in this tradition, I examine the role of maternal attitudes toward sex roles, cohabitation, and premarital sex on multiple dimensions of adult children's partner relationship quality. I make use of a dual conceptualization of marital/cohabiting relationship quality, which separates positive dimensions of relationship quality (happiness) from negative dimensions (relationship discord).

The results show that mothers' egalitarian sex role attitudes are negatively related to children's relationship quality, as measured both by dimensions of happiness and discord. Mothers' tolerance for cohabitation is also negatively related to children's relationship happiness, even when children's own cohabitation attitudes, relationship duration, and current cohabitation status are controlled. However, when relationship quality is measured by dimensions of discord, neither mothers' nor children's cohabitation attitudes are significantly related to relationship quality. Mothers' premarital sex attitudes showed no direct effects on either relationship happiness or discord, though they appear to have some small indirect influence on relationship happiness, through children's own attitudes.

In general the results support my overarching hypothesis: parental attitudes that encourage marriage are associated with higher partner relationship quality among children, and parental attitudes that discourage or delay marriage are negatively related to

partner relationship quality, whether the relationship is marriage or cohabitation. My results suggest that the mechanism by which mothers' attitudes operate is not by speeding age at co-residence for children. Rather, some social or material support behavior is more likely at play for most of the relationships displayed.

Despite the relatively small size of the effects, by identifying previously unmeasured ways in which parental attitudes influence children's behaviors and experiences, this paper makes an important contribution to the literature on intergenerational ideational influences within the family.